MM SYSTEMS

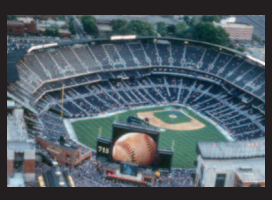
Expansion Joints

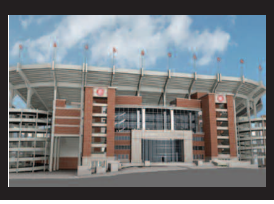
parking | stadiums | plaza decks | bridges

ejp

www.mmsystemscorp.com

Ten things to consider when selecting an expansion joint system




1 Joint Size

Joint openings typically range from 1" (25 mm) to 24" (600 mm) depending upon movement criteria and other structural engineering considerations. Extremely wide openings of 48" (1200 mm) are not uncommon. Not all expansion joint designs can work with all joint opening sizes. Start with your project's service condition requirements.

2 Movement

Movement types include thermal, lateral shear, wind and seismic. Thermal movement expansion joints are typically designed for smaller openings and movement ranges up to +/- 50% of the nominal opening. Seismic expansion joints are generally designed for larger openings and multi-directional movement up to +/- 100% of nominal opening size.

3 Loading Requirements

All horizontal expansion jpoints will accommodate pedestrian traffic. Many systems are appropriate for heavy vehicular or light commercial loads, such as snow plows or fork trucks. For wide-span loadings in parking structures, plaza decks, bridges and stadiums, heavy-duty seismic systems are recommended.

4 Waterproof vs. Water-Resistant

Parking structures, plaza decks, open-air stadiums and the like all require expansion joint systems to be waterproof. Other applications may only require that cover systems be water-resistant or shed casual water. Know and specify the difference.

5 ADA Compliance

The Americans with Disabilities Act requires that no vertical offset exist without a tapered transition. Look for and specify ADA compliant expansion joint systems. ADA compliance may require that expansion joint systems meet specific elevation transition criteria.

6 Fire-Rating/Life-Safety

National and international building codes require fire-rated joint systems where adjacent floors and walls are rated. Test standards have changed to address pre-conditioning (cycling), smoke penetration and field splices. Specify fire barriers and expansion joint systems from a single source to insure code compliance.

7 Colors/Finishes/Aesthetics

MM Systems believes that expansion joint systems should be visually pleasing. Metal options include aluminum, stainless and brass. Rubber seals are available in 8 custom colors. As a licensed Kynar/Hylar applicator, MM can provide finishes on aluminum in virtually any color imaginable.

8 Service Environment

Service environment defines the type of occupancy or functions occurring in the structure. Expansion Joints in stadium concourse areas, for example, must not only accommodate pedestrian traffic, but also fork trucks, and hard-wheeled pallette jacks delivering supplies to concession stands.

9 Technical Support

Our design team approach means we are involved from concept to completion. Design, specification development, field condition evaluations, installation training and forensic investigation are just a few of the services that MM Systems has been providing since 1960.

10 A Total Range of Product Solutions

MM Systems offers a total range of high performance joint sealing systems that meet the rigorous demands of parking garages, stadiums and other open air structures. Whether enginering the largest seismic expansion joint ever built, or providing wind drift joints for 90-mph sandstorms in Dubai, MM can get the job done.

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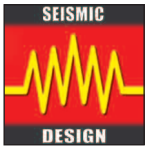
Product Feature Icons

Fire Rated Available icon represents availability of optional fire barriers listed with accredited laboratories.

Waterproof System icon represents availability of a 5-year watertight warranty through our Certified Contractor Network.

Color Match Options icon represents a choice between standard, custom or project specific color matching.



Seismic Design icon represents systems that accommodate multi-directional seismic movement.

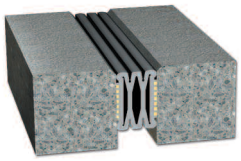
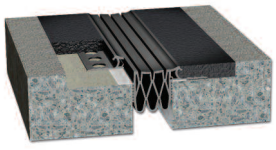
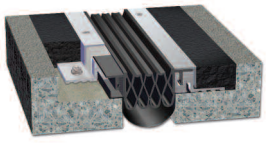
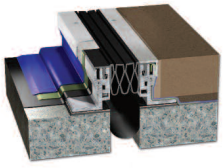
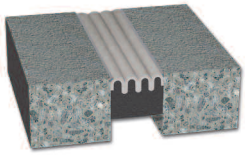
Heavy Duty System icon represents heavy-duty load carrying capability for floors and vandal resistant wall systems.

ADA Compliant icon represents systems that comply with the Americans with Disabilities Act guideline.

No-Bump System icon represents expansion joints that provide flush, no-bump floor-to-floor transitions.

Narrow Sight Line icon represents expansion joints that provide a narrow and aesthetically pleasing sightline.

Waterproof System icon represents expansion joints that provide a watertight exterior seal.

	PARKING/EXTERIOR SYSTEM	SERIES	FEATURES	NOMINAL OPENING	MOVEMENT RANGE	MOVEMENT TYPE	CODES / LOADING TRAFFIC TYPE	APPLICATIONS
8	 EPOXY BONDED SEALING SYSTEM	EBS	• No blockouts required – waterproof sealing system becomes integral with concrete deck. • Tenacious epoxy anchoring system bonds seal to concrete, aluminum and steel. • Engineered to withstand heavy traffic loads and extreme weather conditions. • Available with a 5-year warranty	1"- 4" 25 - 102	.5"- 6.25" 13 - 159	Seismic Thermal Shear	ADA Pedestrian Vehicular Highway Delivery Snowplows	• Parking Deck Drive Lanes • Traffic Speed > 15mph • Enplane/Deplane Road & Bridge • Auto Entrance Ramps • Helix @ Turns & Brake-overs • Heavy Loads/Snowplows & Buses • Below Grade Areas & Retaining Walls
9	 LOKCRETE MEMBRANE SYSTEMS	LMS LSS	• High performance monolithic waterproof expansion joint sealing system. • Membrane seal with perforated wings bonded to deck with impact absorbing elastomeric concrete. • Hard, elastic, abrasion resistant embed material that flexes with deck loads. • Model LSS available for openings up to 10"	.75"- 4.5" 19 - 114	.375"- 6.5" 10 - 165	Seismic Thermal Shear	ADA Pedestrian Vehicular	• Parking Deck Drive Lanes • Traffic Speed < 15mph • Helix & Turning Lanes • Concourse Areas • Pedestrian Bridges • High Volume Pedestrian Traffic • Seismic Joints with Cover
10	 ARMORED STRIP BOLT-IN MEMBRANE SYSTEM	ASB	• Heavy-duty aluminum frame with protective interlocking metal retaining angle. • Replaceable locking Elastoprene seal with secondary fabric reinforced rubber gutter. • Aluminum frame bolted to deck and bonded with impact absorbing elastomeric concrete. • Hard, elastic, abrasion resistant embed material that flexes with deck loads.	1.5"- 4.5" 38 - 114	.75"- 6.5" 19 - 165	Seismic Thermal Shear	ADA Pedestrian Vehicular Delivery	• Parking Deck Drive Lanes • Traffic Speed < 25mph • Turning Lanes • Helix @ Turns & Brake-overs • Concourse Areas • Pedestrian Bridges • High Volume Pedestrian Traffic
11	 SPLIT SLAB MEMBRANE SYSTEMS	SSM SSC SCG	• Continuous locking Elastoprene® seal ties directly into deck waterproofing. • Heavy-duty aluminum frame with protective interlocking metal retaining angle. • Leg height adjusts to accommodate pavers, split-slabs and other topping surfaces. • Available with a 5-year warranty.	1.5"- 4.5" 38 - 114	.75"- 6.5" 19 - 165	Seismic Thermal Shear	ADA Pedestrian Vehicular	• Split Slab Waterproof Conditions • Plaza Decks Paver Areas • Traffic Speed < 15mph • High Volume Pedestrian Traffic • Longitudinal Joints with Cover Plate • Seismic Joints with Gutter & Cover
12	 ELASTOLOK MEMBRANE SYSTEMS	EMS EMC	• Metal reinforced rubber panels lock down continuous wing of Elastoprene® membrane seal. • Slip resistant surface for severe applications and extreme weather conditions. • Epoxy bolt-in and cast-in versions available. • Seal profiles are ADA compliant.	.75"- 4.5" 19 - 114	.75"- 6.5" 19 - 165	Seismic Thermal Shear	ADA Pedestrian Vehicular Highway Delivery Snowplows	• Post tensioned concrete decks • Parking Deck Drive Lanes • Top Deck/Snowplow Areas • Heavy Loads/Buses & Delivery Vehicles • Traffic Speed > 15mph • Helix & Turning Lanes • Enplane/Deplane Ramps Road & Bridge • Fork Trucks / Loading Docks
14	 WATERPROOF FOAM RUBBER SEALING SYSTEMS	EIF EIH EIS ERS	• Epoxy bonded impregnated foam systems provide additional point load support. • Conforms to irregular openings virtually eliminating the risk of costly water damage. • System generates constant external pressure providing a permanent weather-tight seal. • Permanently elastic and will expand to accommodate the concrete deck movement.	.5"- 4.0" 13 - 102	.25"- 6.0" 6 - 152	Seismic Thermal Shear	Horizontal Vertical	• Expands to Fill Irregular Openings • Roadway & Pedestrian Bridges • Pre-cast Concrete Tilt-Up Walls • Below Grade Waterproofing • Seating Bowl Areas (Treads & Risers) • Stair Tower & Slab-to-Wall Conditions • Joint Openings with No Blockouts

Dimensions shown in inches and millimeters.

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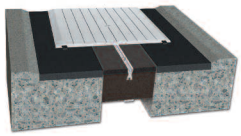
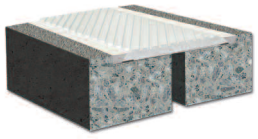
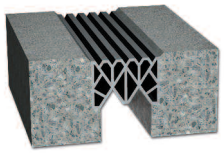
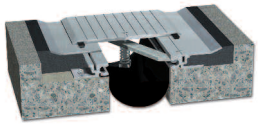
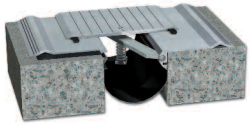
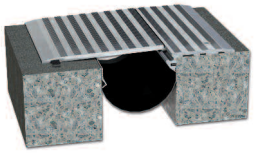
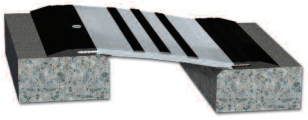
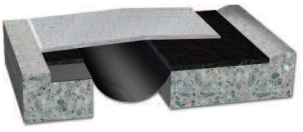
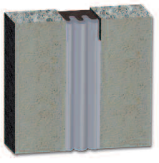
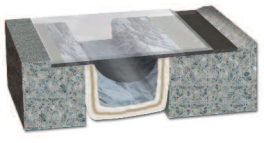
	PARKING/EXTERIOR SYSTEM	SERIES	FEATURES	NOMINAL OPENING	MOVEMENT RANGE	MOVEMENT TYPE	CODES / LOADING TRAFFIC TYPE	APPLICATIONS
16	 SELF-HEALING SEISMIC SEAL SYSTEMS	SHS	• Self-healing seals provide self-centering of attached seismic slide plate. • Self-expanding foam seals conform to irregular concrete openings. • AASHTO HS-20 load carrying capability for wide joints with multi-directional seismic movement. • ADA compliant seismic plates available in various metals and styles.	4"- 18" 102 - 457	2"- 27" 51 - 686	Seismic Thermal Shear	ADA Pedestrian Vehicular	• Arenas, Plaza Decks, Parking Structures • Stadium Seating Bowl (Treads & Risers) • Heavy Loads • Pedestrian Bridges • Parking Deck Drive Lanes • Concourse Areas
17	 POLYURETHANE PREMOLD T-JOINT SYSTEM	PPT	• Factory molded seal provides flush ADA compliant surface. • Zero recess design eliminates collection of dirt. • Uniform thickness and flush surface. • Slip resistant raised surface pattern. • For small movement applications.	.75"- 3.0" 19 - 76	.625"- 4.25" 16 - 108	Thermal	Horizontal Vertical	• Sidewalk Areas • Concourse Areas • Pedestrian Bridges • Elevator & Stair Towers
18	 FLEXIBLE GUTTER SYSTEM	FGS	• Flexible gutter collects and moves water away from the expansion joint system. • Rubber gutter is fabric reinforced to minimize material elongation. • Cost-effective solution for remedial repair of leaking expansion joint systems. • Installed in blockouts or underslab conditions.	2.5"- 20" 64 - 508	0"- 0" 0 - 0	Seismic Thermal Shear	Used Below Expansion Joint Systems	• Primary Water Control • Secondary Water Containment • Cost Effective Waterproofing • Areas Over Occupied Space
19	 ELASTOPRENE COMPRESSION SEAL SYSTEMS	ECS VCS	• Colored rubber multi-web seal profile accommodates expansion and compression. • No mechanical anchors or metal components. • Seal profiles are ADA compliant and provide a smooth transition for pedestrian traffic areas. • Model ECS is for horizontal applications. Model VCS is for vertical applications.	1.3"- 3.8" 33 - 97	.9"- 5.75" 23 - 146	Thermal	Horizontal Vertical	• Vertical Precast & Perimeter Walls • Color Matching of Wall Finishes • Sidewalk Areas • Concourse Areas • Pedestrian Bridges
20	 SEISMIC SLIDE PLATE SYSTEMS	SSP STS SSS SNB	• Load rated heavy-duty metal slide plate with impact and sound dampener. • Recessed extension plates allow smooth slab-to-slab transition. (Not Applicable on STS) • Seismic centering device with dynamic load impact dampener and molded metal ends. • Interlocking frame design insures proper alignment.	4"- 12" 102 - 305	1"- 15" 25 - 381	Seismic Thermal Shear	ADA Pedestrian Vehicular	• Parking Deck Drive Lanes • Traffic Speed < 30mph • Turning Lanes & Entrance Ramps • Heavy Loads • Longitudinal Joints • Pedestrian Bridges
22	 CAST-IN SEISMIC SYSTEMS	CIS BIS	• Cast-In design eliminates slab-to-slab vertical offsets and need for blockouts. • High strength hook bolts adjust around cables in post-tension concrete decks. • Seismic centering device with dynamic load impact dampener and molded metal ends. • BIS series is a low profile bolt-in version.	4"- 12" 102 - 305	2.5"- 15" 64 - 381	Seismic Thermal Shear	ADA Pedestrian Vehicular Delivery	• Post Tension Concrete Decks • Parking Deck Drive Lanes • Turning Lanes & Entrance Ramps • Traffic Speed < 30mph • High Volume Pedestrian Traffic • Longitudinal Joints
23	 SURFACE MOUNT SEISMIC COVER SYSTEM	SMS	• Surface mount design eliminates need for blockouts. • Load rated heavy-duty aluminum slide plate with impact and sound dampener. • Aluminum base member incorporates tire impact deflection design and integral rubber gutter. • Seismic centering device with dynamic load impact dampener and molded metal ends.	4"- 12" 102 - 305	2"- 15" 51 - 381	Seismic Thermal Shear	ADA Pedestrian Vehicular	• Parking Deck Drive Lanes • Traffic Speed < 15mph • Turning Lanes & Entrance Ramps • Heavy Loads • Helix

Dimensions shown in inches and millimeters.

	PARKING/EXTERIOR SYSTEM	SERIES	FEATURES	NOMINAL OPENING	MOVEMENT RANGE	MOVEMENT TYPE	CODES / LOADING TRAFFIC TYPE	APPLICATIONS
24	 HINGED SAFETY COVER SYSTEM	HSC	• Load rated heavy-duty aluminum slide plate with impact and sound dampener. • Hinge design accommodates vertical offsets in concrete decks. • Integral fabric reinforced rubber waterproofing gutter. • ADA compliant slip resistant raised pattern design.	2"- 10" 51 - 254	1"- 10" 25 - 254	Seismic Thermal Shear	ADA Pedestrian Vehicular	• Areas with Vertical Slab Offsets • High Volume Pedestrian Areas • Pedestrian Bridges • Traffic Speed < 15mph • Concourse Areas • Sidewalk Areas
25	 RUBBER SAFETY COVER SYSTEM	RSC	• Covers expansion joint recess and vertical offsets in concrete slab. • Convex shaped aluminum cover with raised slip resistant pattern. • ADA compliant rubber nosing pads with mechanical hinges. • Integral slip resistant rubber safety strips.	2"- 4" 51 - 102	0"- 7.5" 0 - 191 Vehicular 0"- 8" 0 - 203 Pedestrian	Seismic Thermal Shear	ADA Pedestrian Vehicular	• Stadium Seating Bowl • Low Speed Vehicular Traffic • Areas with Vertical Slab Offsets • High Volume Pedestrian Areas • Pedestrian Bridges • Traffic Speed < 15mph • Concourse Areas • Sidewalk Areas
26	 IMPACT DAMPING SYSTEMS	GID AID	• Load rated heavy-duty steel or aluminum slide plate. • Crowned cover design accommodates vertical offsets in concrete decks. • EPDM rubber base pads absorb vehicular impact loads. • Fabric reinforced rubber waterproofing gutter with optional drain tube assembly.	2"- 10" 51 - 254	1"- 15" 25 - 381	Thermal	ADA Pedestrian Vehicular	• Parking Deck Drive Lanes • Heavy Loads • Traffic Speed < 15mph • Pedestrian Bridges • Concourse Areas • Sidewalk Areas • Helix
27	 VERTICAL SEALING SYSTEM	VSS	• Seismic seal snap-locked into two aluminum frames. • No visible aluminum or hardware. • Visual seals are available in standard and custom colors. • Resistant to UV, ozone, acid rain, most chemicals and extreme temperatures.	2"- 10" 51 - 254	1.25"- 24" 32 - 610	Seismic Thermal Shear	Vertical	• Seismic Vertical Joint Openings • Vertical Precast & Perimeter Walls • Vertical Openings with No Blockouts • Color Matching of Wall Finishes • Available with Secondary Water Seal
28	 COLORJOINT ESS SERIES	ESS	• Preformed silicone strip bonded to a rectangular polyurethane backer creates a watertight sealing system. • System conforms to irregular openings and is soundproof, dust-proof, water and air tight. • Engineered 1/2" thick preformed silicone strip virtually eliminates possibility of punctures. • Resistant to UV, ozone, and extreme temperatures.	.9"- 6.75" 22 - 171	.5"- 10.5" 13 - 267	Seismic Thermal	Vertical Horizontal May Require Cover	• Color Matching of Wall Finishes • Vertical Brick & Block Walls • Vertical Precast & Perimeter Walls • Abutments • Stair Tower & Slab-to-Wall Conditions • Vertical Joints with No Blockouts • Irregular Expansion Joint Openings
29	 COLORJOINT ESS SERIES	SIF	• Binary silicone seal and impregnated foam nearly eliminates possibility of punctures. • Permanently elastic and will expand to the required joint movement. • Watertight, dust-proof, airtight, soundproof seal resilient and flexible to -39°F. • Seismic movement capability with near zero tensile stress at bond line.	.5"- 8" 13 - 203	.25"- 12" 6 - 305	Seismic Thermal Shear	Vertical Horizontal May Require Cover	• Color Matching of Wall Finishes • Vertical Brick & Block Walls • Vertical Precast & Perimeter Walls • Abutments • Stair Tower & Slab-to-Wall Conditions • Vertical Joints with No Blockouts • Irregular Expansion Joint Openings
30	 PYRO-FLEX FIRE BARRIER SYSTEMS	UPF PF	• ASTM Test Standards E-119, E-1399 and E-1966. • Additional Standards: UL 263, UL 2079, UBC 43-1, UBC 7-1, ANSI A2.1 and NFPA 251. • Available in 2, 3, 4 and 5 hour ratings and cycle tested for Class II & III movement including lateral shear. • Listed with UL, Omega Point Laboratories, California State Fire Marshal and ICBO Evaluation Service.	1"- 32" 25 - 813	0"- 48" 0 - 1219	Seismic Thermal Shear	Ratings: 1 Hour 2 Hour 3 Hour 4 Hour	• Horizontal Concrete Joint Openings • Vertical Concrete Joint Openings • Horizontal Gypboard Joint Openings • Vertical Gypboard Joint Openings

Dimensions shown in inches and millimeters.

MM® Epoxy Bonded Sealing System

Performance Data

Elastoprene® rubber seal epoxy bonded to structural concrete joint opening creating a waterproof system.

- No blockouts required – waterproof sealing system becomes integral with concrete deck.
- Tenacious thixotropic epoxy anchoring system bonds seal to concrete.
- ADA compliant seal profile provides pedestrian friendly walking surface.
- Engineered to withstand heavy traffic loads, UV, ozone, acid rain, most chemicals and extreme temperatures.
- Capable of thermal, seismic, vertical and lateral shear movement.
- Accommodates complex miters and changes in direction.
- Available with 5-year warranty through Certified Contractor Network.

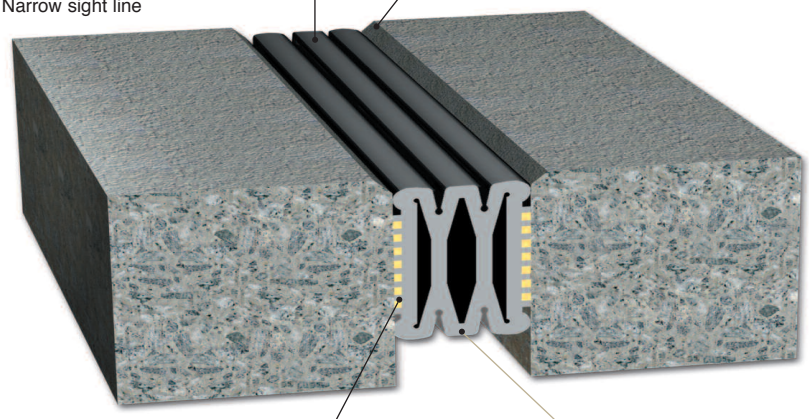
Product Features

Color Options

Black Gray

Elastoprene® Rubber Seal
- ADA Compliant
- Accommodates complex miters
- Rubber hinge points accomodate vertical deflection
- Narrow sight line

Chamfer Edge of Concrete Joint



High Strength Epoxy Adhesive
- 2 component
- Vaccum compress for ease of installation

Vacuum Compress to Install

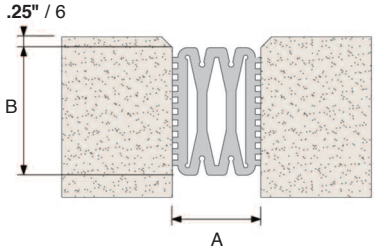
Movement Table

MODEL	Total Movement	Joint Opening "A" Thermal Min.	Thermal Max.	Safety Max.	Seal Size Width "A"	Depth "B"	Installation Range "A" Min.	Max.
EBS-100	1.25" 32	0.50" 13	1.50" 38	1.75" 44	1.50" 38	1.475" 37	.75" 19	1.25" 32
EBS-150	1.75" 44	0.75" 19	2.00" 51	2.50" 64	2.00" 51	1.875" 48	1.00" 25	1.75" 44
EBS-200	1.75" 44	1.25" 32	2.50" 64	3.00" 76	2.75" 70	2.625" 67	1.75" 44	2.25" 57
EBS-250	2.625" 67	1.375" 35	3.50" 89	4.00" 102	3.50" 89	3.00" 76	2.00" 51	3.25" 83
EBS-300	3.50" 89	1.50" 38	4.50" 114	5.00" 127	4.50" 114	3.00" 76	2.375" 61	4.25" 108
EBS-400	4.50" 114	1.75" 44	5.50" 140	6.25" 159	5.50" 140	3.00" 76	3.125" 79	5.25" 133

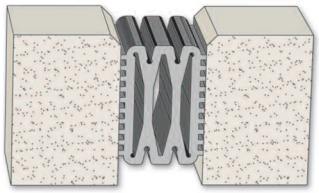
Dimension shown in **inches (bold)** and millimeters.
Width "A" is the seals' relaxed dimension.
Depth "B" is a fully compressed clearance dimension.

Safety Max. - Safety margin movement capacity accommodates concrete shrinkage, vertical deflection and unexpected movement.

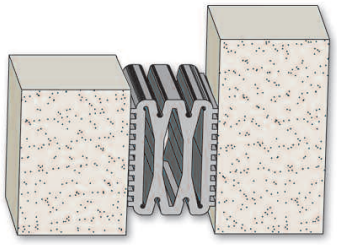
Contact MM Systems for Below Grade Applications.



Model EBS



Model EBS
Slab-to-Slab / Movement .50" to 6.25"



Model EBS
Slab-to-Wall / Movement .50" to 6.25"

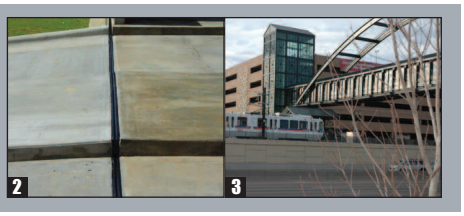
NOTE: Contact MM Systems for below grade applications.

PROJECTS

1 UNLV - Elevator Tower EBS Isolation Joint

2 Partners III, NC - EBS at breakover ramp entrance

3 Lincoln Parking Deck - Ideal for Ramps, Bridges, and Train Stations



MM® LokCrete Membrane System

Performance Data

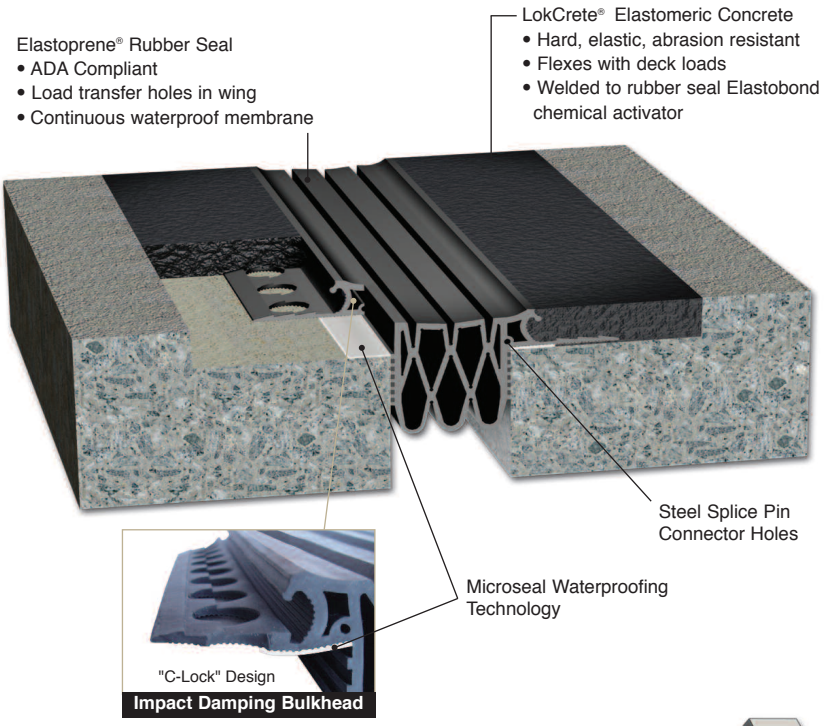
Waterproof Elastoprene® rubber membrane seal with impact absorbing LokCrete® elastomeric concrete header.

- High performance monolithic waterproof expansion joint sealing system.
- Capable of thermal, seismic, vertical and lateral shear movement.
- Membrane seal with perforated wings bonded to deck with impact absorbing elastomeric concrete.
- LokCrete® is a hard, elastic, abrasion resistant embed material that flexes with deck loads.
- No primers required – bonds directly to concrete.
- ADA compliant low profile seal design accommodates post tension cables and conduit.
- Resistant to UV, ozone, acid rain, most chemicals and extreme temperatures.
- Available with a 5-year warranty through Certified Contractor Network.

Product Features

Color Options

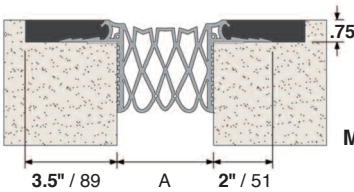
Black Gray



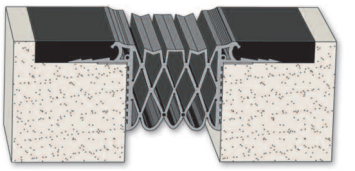
Movement Table

MODEL	Total Movement	Joint Opening "A" Thermal Min.	Thermal Max.	Safety Max.	Installation Range "A" Min.	Max.
LMS-100	0.875" 22	0.375" 10	1.00" 25	1.25" 32	0.50" 13	0.75" 19
LMS-150	1.25" 32	0.50" 13	1.50" 38	1.75" 44	0.75" 19	1.25" 32
LMS-250	2.50" 64	0.75" 19	2.50" 64	3.25" 83	1.25" 32	2.25" 57
LMS-350	3.25" 83	1.00" 25	3.50" 89	4.25" 108	1.50" 38	3.25" 83
LMS-450 LP	4.00" 102	1.50" 38	4.50" 114	5.50" 140	2.25" 57	4.25" 108
LMS-450 HD	4.00" 102	1.50" 38	4.50" 114	5.50" 140	2.25" 57	4.25" 108
LMS-550 LP	5.00" 127	1.50" 38	5.50" 140	6.50" 165	3.00" 76	5.25" 133
LMS-550 HD	5.00" 127	1.50" 38	5.50" 140	6.50" 165	3.00" 76	5.25" 133
LSS-300	2.50" 64	0.50" 13	2.00" 51	3.00" 76	0.75" 19	1.50" 38
LSS-400	3.50" 89	0.75" 19	3.00" 76	4.25" 108	1.00" 25	2.00" 51
LSS-1600	14.0" 356	2.00" 51	10.0" 254	16.0" 406	2.75" 70	8.0" 203

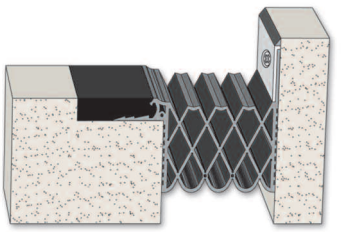
Dimension shown in **inches (bold)** and millimeters.
Add "C" after the model number (eg. LMS-C-250) for slab-to-wall
LP = low profile / HD = heavy duty
Safety Max. - Safety margin movement capacity accommodates concrete shrinkage, vertical deflection and unexpected movement.



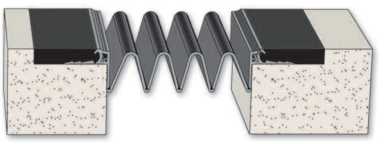
Model LMS



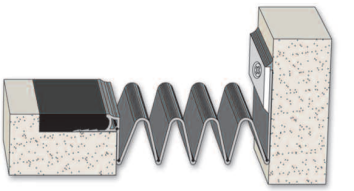
Model LMS
Slab-to-Slab / Movement .375" to 6.5"



Model LMS-C
Slab-to-Wall / Movement .375" to 6.5"



Model LSS
Slab-to-Slab / Movement .50" to 16"
(requires a cover plate - not shown)



Model LSS-C
Slab-to-Wall / Movement .50" to 16"
(requires a cover plate - not shown)

PROJECTS

1 North Hills Mall, North Carolina

2 Bush International Airport - Helix Entrance

3 Georgia Aquarium - 1 million cars per year

MM® Armored Strip Bolt-In Membrane System

Performance Data

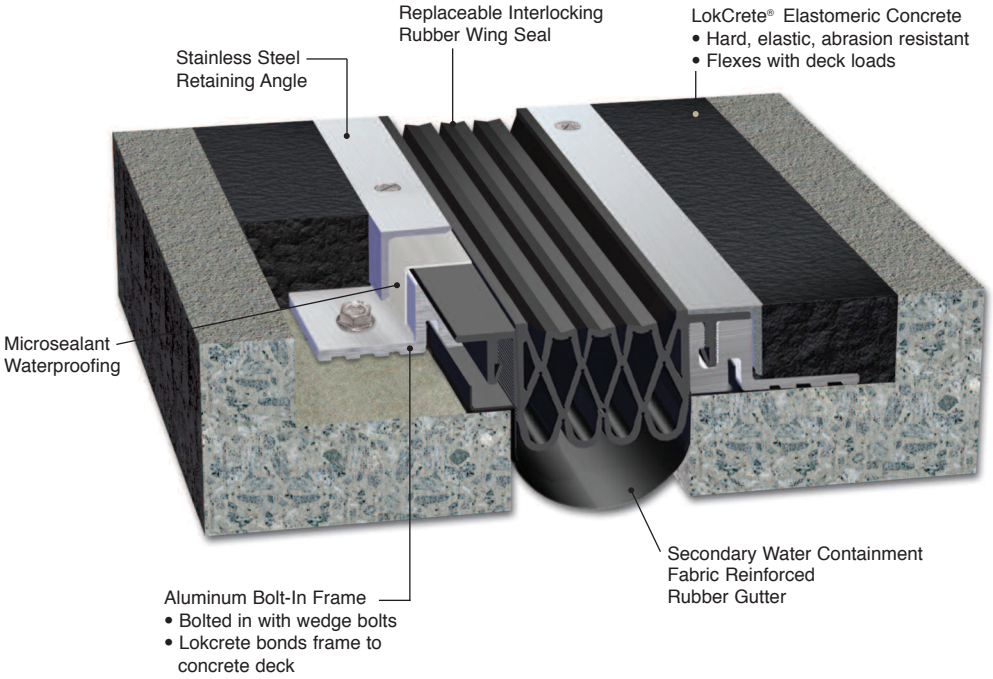
Continuous Elastoprene® seal and stainless steel armored edge with impact absorbing LokCrete® elastomeric concrete header.

- High performance monolithic waterproof expansion joint sealing system.
- Armored Stainless Steel retaining angle protects continuous Elastoprene seal.
- Heavy Duty aluminum frame bonded to deck with impact absorbing elastomeric concrete.
- LokCrete® is a hard, elastic, abrasion resistant embed material that flexes with deck loads.
- Capable of thermal, seismic, vertical and lateral shear movement.
- ADA compliant seal design provides pedestrian friendly walking surface.
- Resistant to UV, ozone, acid rain, most chemicals and extreme temperatures.
- A warranty may be available through Certified Contractor Network.

Product Features

Color Options

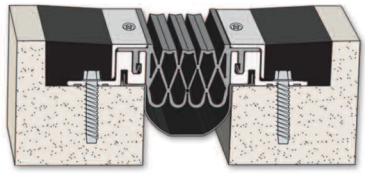
Black Gray



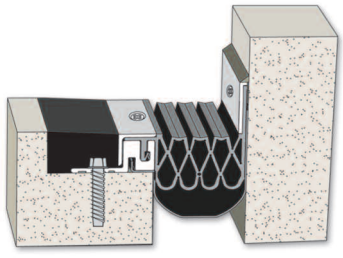
Movement Table

MODEL	Total Movement	Joint Opening "A" Thermal Min.	Thermal Max.	Safety Max.	Installation Range "A" Min.	Max.
ASB-250	2.50" 64	0.75" 19	2.50" 64	3.25" 83	1.25" 32	2.25" 57
ASB-350	3.25" 83	1.00" 25	3.50" 89	4.25" 108	1.50" 38	3.25" 83
ASB-450	4.00" 102	1.50" 38	4.50" 114	5.50" 140	2.25" 57	4.25" 108
ASB-550	5.00" 127	1.50" 38	5.50" 140	6.50" 165	3.00" 76	5.25" 133
ASB-C-250	2.50" 64	0.75" 19	2.50" 64	3.25" 83	1.25" 32	2.25" 57
ASB-C-350	3.25" 83	1.00" 25	3.50" 89	4.25" 108	1.50" 38	3.25" 83
ASB-C-450	4.00" 102	1.50" 38	4.50" 114	5.50" 140	2.25" 57	4.25" 108
ASB-C-550	5.00" 127	1.50" 38	5.50" 140	6.50" 165	3.00" 76	5.25" 133

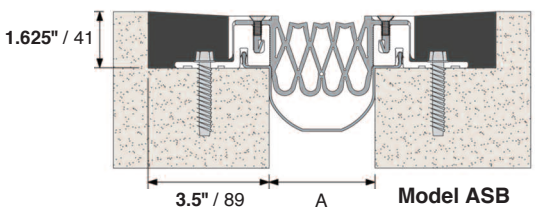
Dimension shown in **inches (bold)** and millimeters.
Safety Max - Safety margin movement capacity accommodates concrete shrinkage, vertical deflection and unexpected movement.



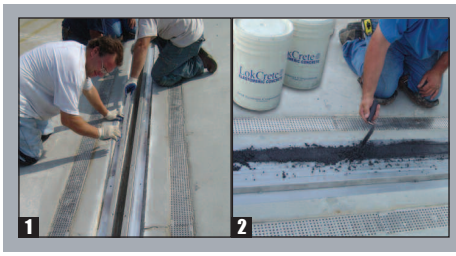
Model ASB
Slab-to-Slab / Movement .75" to 6.5"



Model ASB-C
Slab-to-Wall / Movement .75" to 6.5"



Model ASB



PROJECTS

1 O'Hare Airport Garage - ASB Armored Frame installation

2 LokCrete placement

3 ASB completed installation

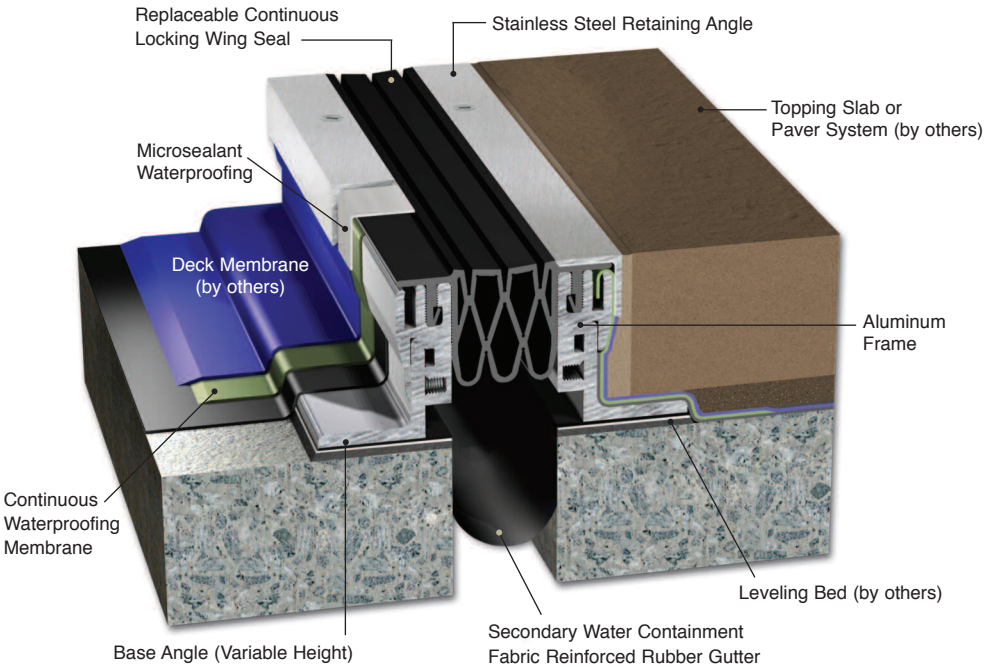
MM® Split Slab Membrane System

Performance Data

Heavy-duty aluminum frame with continuous locking Elastoprene® seal for waterproof split-slab applications.

- Continuous locking Elastoprene® seal ties directly into deck waterproofing.
- Heavy-duty aluminum frame with protective interlocking stainless steel retaining angle.
- Leg height adjusts to accommodate pavers, split-slabs and other topping surfaces.
- Capable of thermal, seismic, vertical and lateral shear movement.
- Exceptionally durable under vehicular traffic loads and extreme weather conditions.
- ADA compliant seal profile provides pedestrian friendly walking surface.
- Seal profile splices can be heat welded or adhesive bonded.
- Factory fabricated tee's, crosses and directional changes are available.
- A warranty may be available through Certified Contractor Network.

Product Features



Movement Table

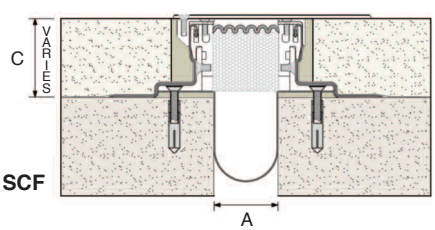
MODEL	Total Movement	Joint Opening "A" Thermal Min.	Thermal Max.	Safety Max.	Installation Range "A" Min.	Max.
SSM-250	2.50" 64	0.75" 19	2.50" 64	3.25" 83	1.25" 32	2.25" 57
SSM-350	3.25" 83	1.00" 25	3.50" 89	4.25" 108	1.50" 38	3.25" 83
SSM-450	4.00" 102	1.50" 38	4.50" 114	5.50" 140	2.25" 57	4.25" 108
SSM-550	5.00" 127	1.50" 38	5.50" 140	6.50" 165	3.00" 76	5.25" 225
SSM-C-250	2.50" 64	0.75" 19	2.50" 64	3.25" 83	1.25" 32	2.25" 57
SSM-C-350	3.25" 83	1.00" 25	3.50" 89	4.25" 108	1.50" 38	3.25" 83
SSM-C-450	4.00" 102	1.50" 38	4.50" 114	5.50" 140	2.25" 57	4.25" 108
SSM-C-550	5.00" 127	1.50" 38	5.50" 140	6.50" 165	3.00" 76	5.25" 225

Dimension shown in **inches (bold)** and millimeters.

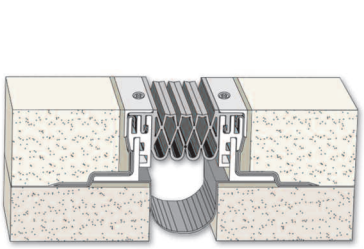
Contact MM Systems for SCG and SCF movement tables. SSC Series movement tables identical.

Safety Max - Safety margin movement capacity accommodates concrete shrinkage, vertical deflection and unexpected movement.

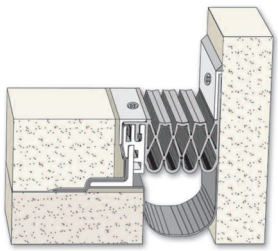
Note: "C" Dimension is 1.75"/ 44mm minimum and maximum varies per project design - please specify depth.



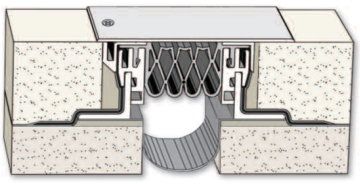
Model SCF



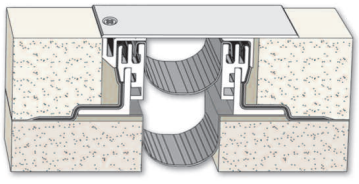
Model SSM
Slab-to-Slab / Movement .75" to 6.5"



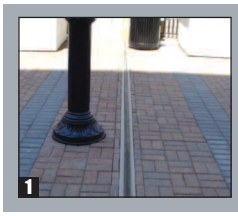
Model SSM-C
Slab-to-Wall / Movement .75" to 6.5"



Model SSC
Split Slab Membrane System with Cover Plate
See web site for recessed cover version



Model SCG
Split Slab Membrane System with Fabric Reinforced Gutter and Cover Plate



PROJECTS

1 Marriott Connecticut Convention Center

2 University of Massachusetts Plaza Deck

3 Salt River Project, Arizona Brass SSM System

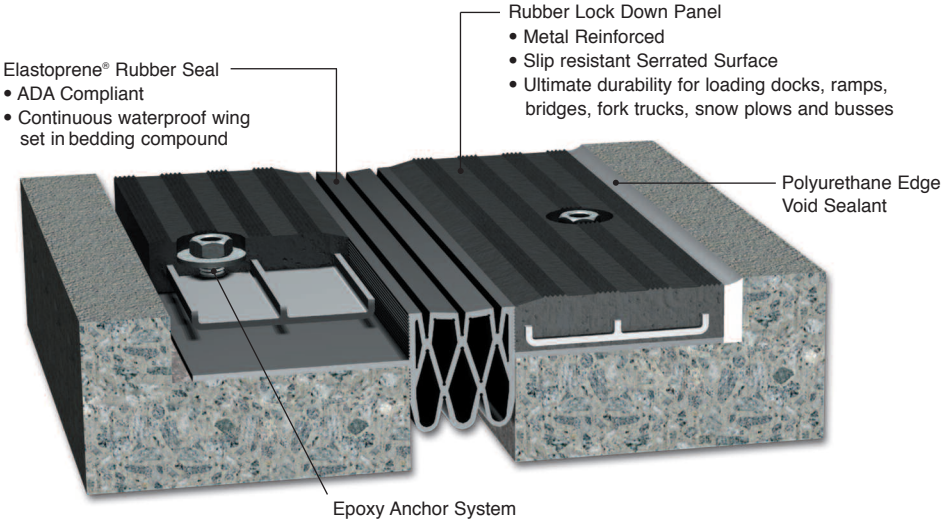
MM® ElastoLok Membrane Systems

Performance Data

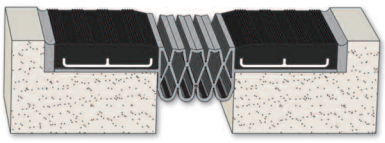
Metal reinforced rubber lock down panels with continuous Elastoprene® rubber membrane seal.

- Slip resistant surface for severe applications and extreme weather conditions.
- Metal reinforced rubber panels lock down continuous wing of Elastoprene® membrane seal.
- Specialty bedding compound insures a watertight seal to the concrete deck.
- Ultimate durability for loading docks, ramps, bridges, fork trucks, snow plows and buses.
- Seal profiles are ADA compliant and can be heat welded or adhesive bonded.
- A warranty may be available through Certified Contractor Network.
- **EMC**: Cast-In design eliminates the need to drill anchor holes in post tensioned concrete deck.

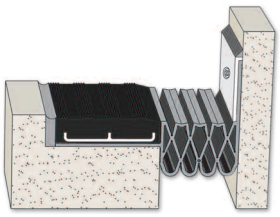
Product Features



EMS Series / Bolt-In / Recessed Blockout



Model EMS / Bolt-In
Slab-to-Slab / Movement .75" to 6.5"



Model EMS-C / Bolt-In
Slab-to-Wall / Movement .75" to 6.5"

Movement Table

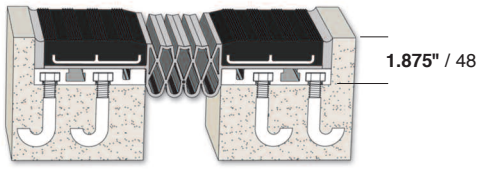
MODEL	Total Movement	Joint Opening "A" Thermal Min.	Thermal Max.	Safety Max.	Installation Range "A" Min.	Max.
EMS-250	**2.50"** 64	**0.75"** 19	**2.50"** 64	**3.25"** 83	**1.25"** 32	**2.25"** 57
EMS-350	**3.25"** 83	**1.00"** 25	**3.50"** 89	**4.25"** 108	**1.50"** 38	**3.25"** 83
EMS-450	**4.00"** 102	**1.50"** 38	**4.50"** 114	**5.50"** 140	**2.25"** 57	**4.25"** 108
EMS-550	**5.00"** 127	**1.50"** 38	**5.50"** 140	**6.50"** 165	**3.00"** 76	**5.25"** 33
EMS-C-250	**2.50"** 64	**0.75"** 19	**2.50"** 64	**3.25"** 83	**1.25"** 32	**2.25"** 57
EMS-C-350	**3.25"** 83	**1.00"** 25	**3.50"** 89	**4.25"** 108	**1.50"** 38	**3.25"** 83
EMS-C-450	**4.00"** 102	**1.50"** 38	**4.50"** 114	**5.50"** 140	**2.25"** 57	**4.25"** 108
EMS-C-550	**5.00"** 127	**1.50"** 38	**5.50"** 140	**6.50"** 165	**3.00"** 76	**5.25"** 133

Dimension shown in **inches (bold)** and millimeters.

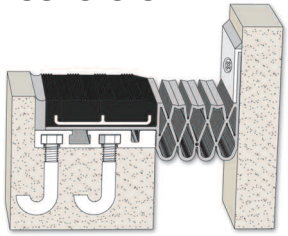
Safety Max - Safety margin movement capacity accommodates concrete shrinkage, vertical deflection and unexpected movement.

EMC Series movement table identical.

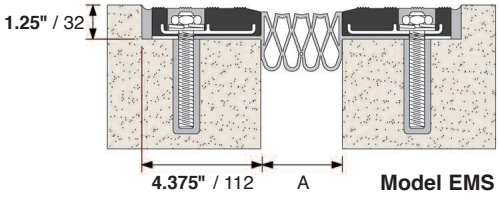
EMC Series / Cast-In / Post Tensioned Concrete



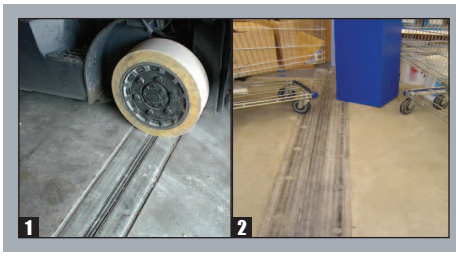
Model EMC / Cast-In
Slab-to-Slab / Movement .75" to 6.5"



Model EMC-C / Cast-In
Slab-to-Wall / Movement .75" to 6.5"



Model EMS



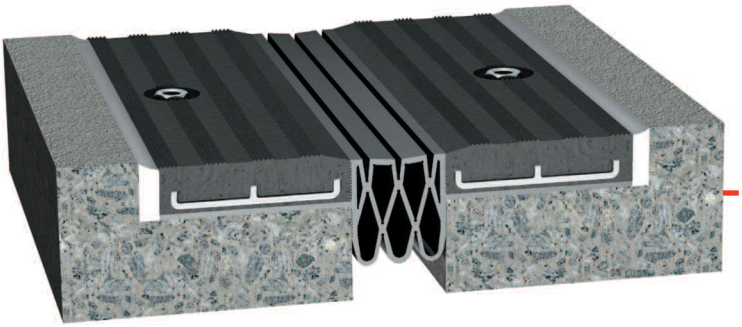
PROJECTS

1 Severe Impact Loads – Hard Wheel Fork Trucks

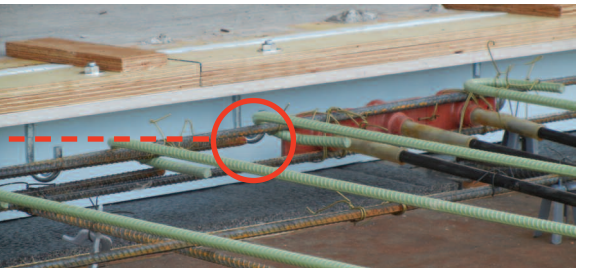
2 Retail Applications – IKEA Store

3 Loading Dock Applications

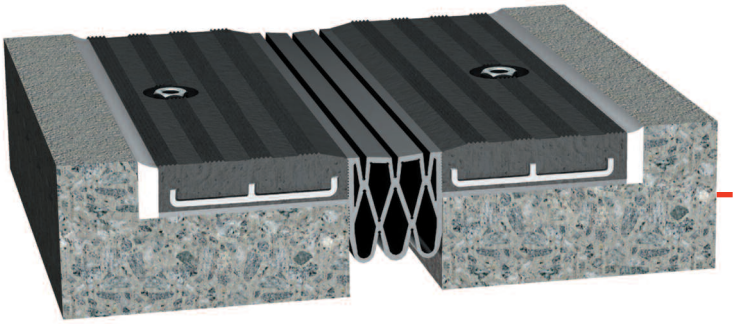
EMS Series - Parking Garage Application

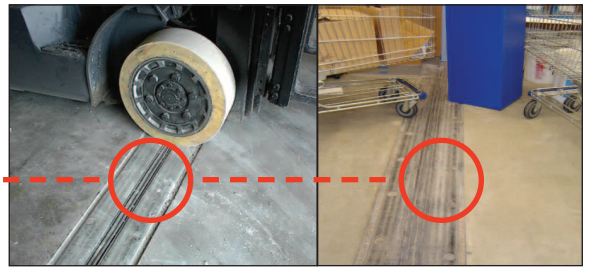


EMC Series - Post Tension Parking Garage Application



EMS Series - Retail / Hard Wheeled Carts Application





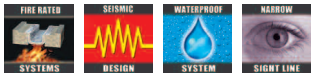
MM® Waterproof Foam Rubber Sealing Systems

Performance Data

Self-expanding microcell foam rubber extruded or impregnated with acrylic polymer sealing compound.

- Waterproof sealing systems not requiring blockouts.
- Epoxy bonded sidewalls provide additional point load support.
- Conforms to irregular openings minimizing the risk of costly water damage.
- System generates constant outward pressure providing a permanent weather tight seal.
- Permanently elastic and will expand and accommodate the concrete deck movement.
- Resistant to UV, ozone, acid rain, wind driven rain and extreme temperatures to -39°F.
- Provides watertight seal in below-grade applications when combined with specified waterproofing systems.

Product Features



Movement Table

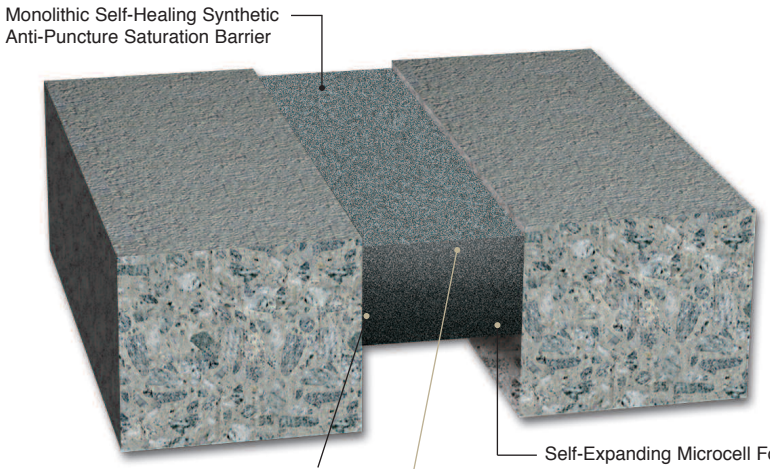
MODEL	Total Movement	Movement Range "A" Minimum	Movement Range "A" Nominal	Movement Range "A" Maximum	Seal Depth "B"	Piece Lengths Feet	Piece Lengths Meters
EIH-050	0.50" 13	0.250" 6	0.50" 13	0.75" 19	1.50" 38	21'	6.4
EIH-063	0.63" 16	0.312" 8	0.63" 16	0.938" 24	1.50" 38	14.5'	4.4
EIH-075	0.75" 19	0.375" 10	0.75" 19	1.125" 29	1.50" 38	7.5'	2.3
EIH-100	1.00" 25	0.500" 13	1.00" 25	1.500" 38	2.00" 51	7.5'	2.3
EIH-125	1.25" 32	0.625" 16	1.25" 32	1.875" 48	2.00" 51	5.0'	1.5
EIH-150	1.50" 38	0.750" 19	1.50" 38	2.250" 57	2.00" 51	5.0'	1.5
EIH-175	1.75" 44	0.875" 22	1.75" 44	2.625" 67	2.00" 51	5.0'	1.5
EIH-200	2.00" 51	1.000" 25	2.00" 51	3.00" 76	3.00" 76	5.0'	1.5
EIH-225	2.25" 57	1.125" 29	2.25" 57	3.375" 86	3.00" 76	5.0'	1.5
EIH-250	2.50" 64	1.250" 32	2.50" 64	3.750" 95	3.00" 76	5.0'	1.5
EIH-275	2.75" 70	1.375" 35	2.75" 70	4.150" 105	3.00" 76	5.0'	1.5
EIH-300	3.00" 76	1.500" 38	3.00" 76	4.500" 114	3.00" 76	5.0'	1.5
EIH-325	3.25" 83	1.562" 40	3.25" 83	4.812" 122	3.00" 76	5.0'	1.5
EIH-350	3.50" 89	1.750" 44	3.50" 89	5.250" 133	3.00" 76	5.0'	1.5
EIH-375	3.75" 96	1.875" 48	3.75" 96	5.625" 143	4.00" 102	5.0'	1.5
EIH-400	4.00" 102	2.000" 51	4.00" 102	6.00" 152	4.00" 102	5.0'	1.5

Dimension shown in **inches (bold)** and millimeters.
Larger sizes available. Call MM Systems for details.
EIH, EIF & EIS Series movement tables identical.

MODEL	Total Movement	Joint Opening "A" Min.	Joint Opening "A" Max.	Installation Range "A" Min.	Installation Range "A" Max.	Depth "B"
ERS-100	0.75" 19	0.50" 13	1.25" 32	0.75" 19	0.9" 23	1.50" 38
ERS-150	1.50" 38	0.50" 13	2.00" 51	1.13" 29	1.35" 34	2.13" 54
ERS-200	1.75" 44	0.75" 19	2.50" 64	1.50" 38	1.8" 46	2.75" 70
ERS-250	2.25" 57	1.00" 25	3.25" 83	1.88" 48	2.25" 57	3.38" 86

Dimension shown in **inches (bold)** and millimeters.
Width "A" is the seals relaxed dimension and Depth "B" is when it is fully compressed.

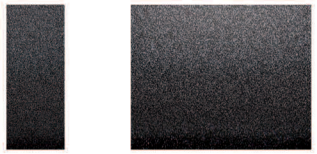
EIH Series - Expanding Impregnated Healer-Sealer Foam



Self-Healing & Sealing Technology

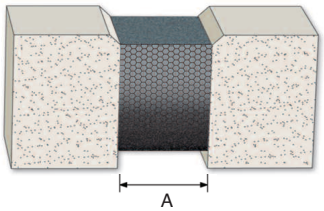
Synthetic anti-puncture barrier provides self-healing and sealing protection

Self-Expanding Foam Technology

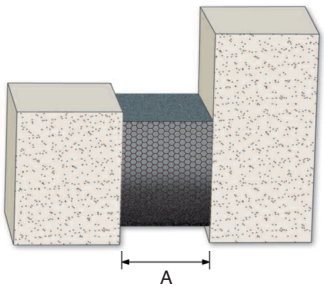


Pre-compressed for shipment

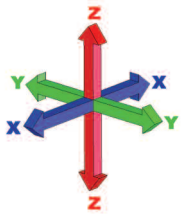
After Self-Expansion



Model EIH
Slab-to-Slab / Movement .25" to 6.0"



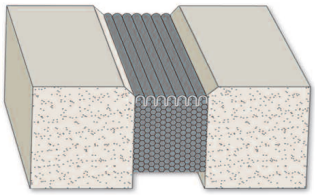
Model EIH
Slab-to-Wall / Movement .25" to 6.0"



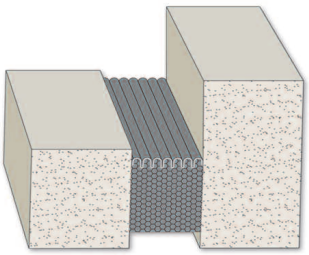
Seismic Movement Capability

X-Axis - Expansion & Contraction
Y-Axis - Lateral Shear
Z-Axis - Vertical Displacement

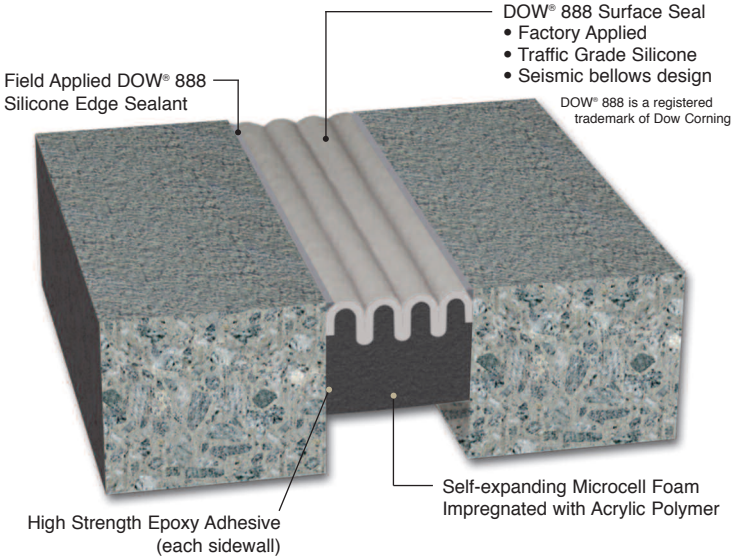
EIS Series - Expanding Impregnated Seismic Foam



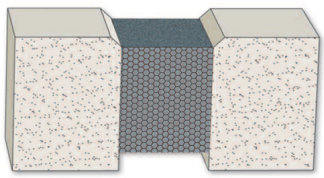
Model EIS
Slab-to-Slab / Movement .25" to 6.0"



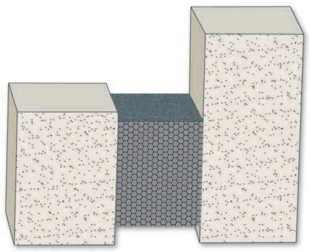
Model EIS
Slab-to-Wall / Movement .25" to 6.0"



EIF Series - Expanding Impregnated Foam

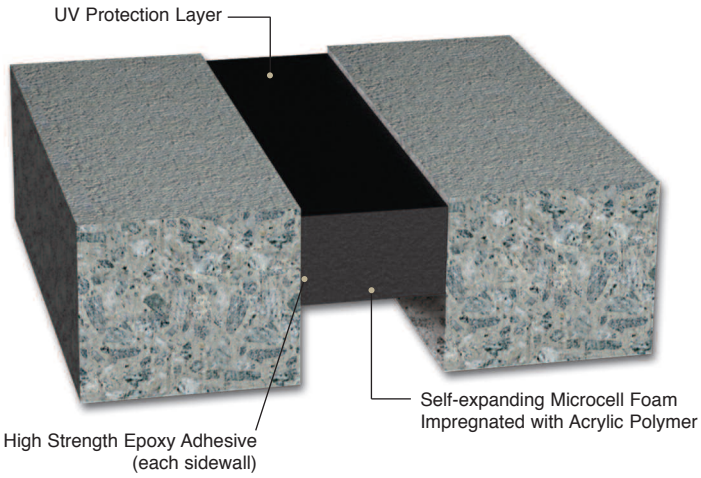


Model EIF
Slab-to-Slab / Movement .25" to 6.0"

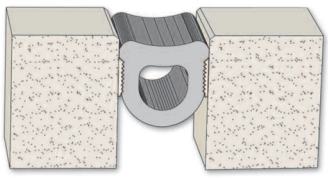


Model EIF
Slab-to-Wall / Movement .25" to 6.0"

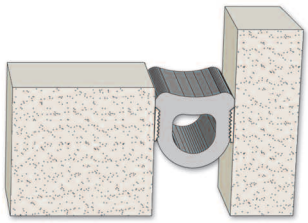
NOTE: Contact MM Systems for details of below grade and field appled silicone wearcourse applications.



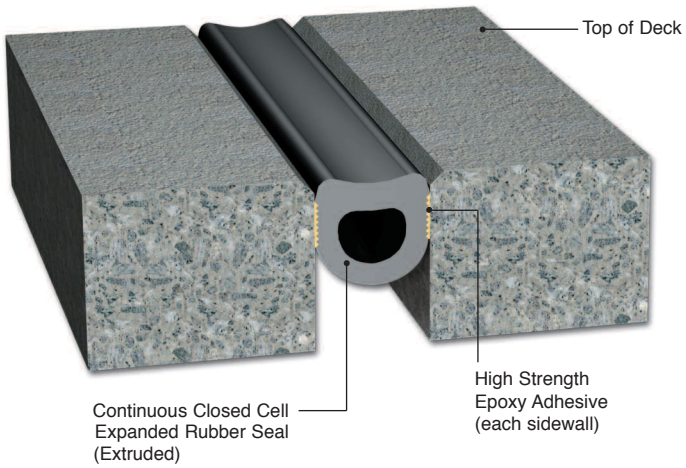
ERS Series - Expanded Rubber Seal



Model ERS
Slab-to-Slab / Movement .5" to 3.75"
(Cover Plate may be required - not shown)



Model ERS
Slab-to-Wall
(Cover plate not required)



MM® Self-Healing Seismic Seal Systems

Performance Data

Seismic Self-Healing Seal with aluminum slide plate and seismic rotation assembly.

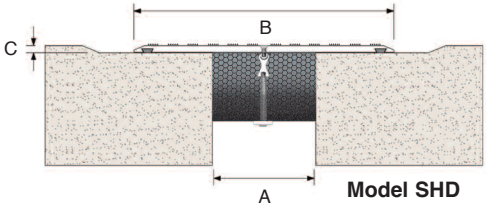
- Watertight self-expanding acrylic impregnated foam conforms to irregular openings virtually eliminating the risk of costly water damage.
- Monolithic seal with dual impregnation process provides integral “self” healing and sealing capability.
- Seismic Rotation Dowel facilitates zero tensile stress at epoxy bond lines and provides multi-directional seismic movement capability.
- Seismic seals provide equidistant centering of seismic assembly and slide plate cover.
- AASHTO HS-20 load carrying capability.
- Complies with ADA guidelines.
- Slide plate assembly available in aluminum (standard), stainless steel, with impact/sound dampers or dual hinged nosing pads.

Product Features

Movement Table

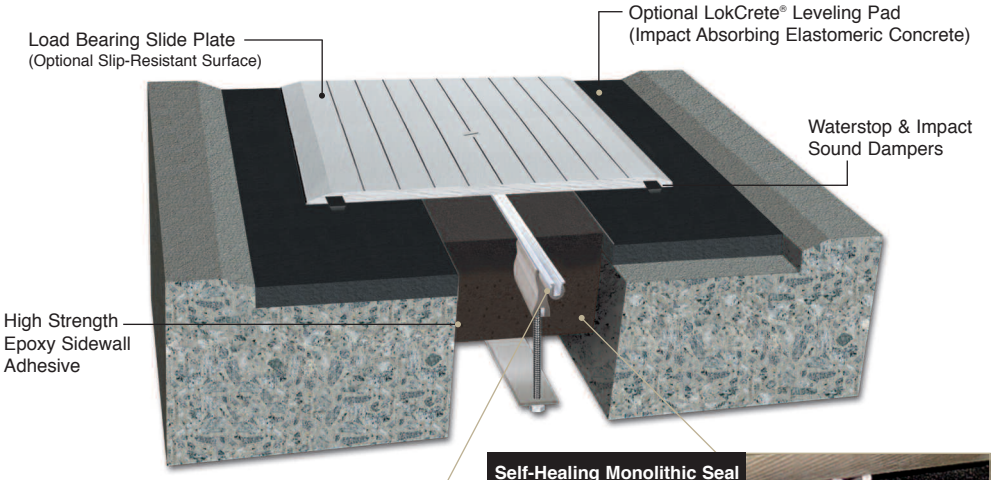
MODEL	Total Movement	Joint Opening “A” Minimum	Joint Opening “A” Nominal	Joint Opening “A” Seismic Max.	Slide Plate “B”	Slide Plate Thickness “C”
SHS-400*	4.00" 102	2.00" 51	4.00" 102	6.00" 152	8.00" 203	0.375" 10
SHS-500*	5.00" 127	2.50" 64	5.00" 127	7.50" 191	11.00" 279	0.375" 10
SHS-600	6.00" 152	3.00" 76	6.00" 152	9.00" 229	11.00" 279	0.375" 10
SHS-700	7.00" 178	3.50" 89	7.00" 178	10.50" 267	14.00" 356	0.375" 10
SHS-800	8.00" 203	4.00" 102	8.00" 203	12.00" 305	14.00" 356	0.375" 10
SHS-900	9.00" 229	4.50" 114	9.00" 229	13.50" 343	17.00" 432	0.375" 10
SHS-1000	10.00" 254	5.00" 127	10.00" 254	15.00" 381	17.00" 432	0.375" 10
SHS-1100	11.00" 279	5.50" 140	11.00" 279	16.50" 419	20.00" 508	0.500" 13
SHS-1200	12.00" 305	6.00" 152	12.00" 305	18.00" 457	20.00" 508	0.500" 13
SHS-1300	13.00" 330	6.50" 165	13.00" 330	19.50" 495	21.50" 546	0.500" 13
SHS-1400	14.00" 356	7.00" 178	14.00" 356	21.00" 533	23.00" 584	0.500" 13
SHS-1500	15.00" 381	7.50" 191	15.00" 381	22.50" 572	24.50" 662	0.500" 13
SHS-1600	16.00" 406	8.00" 203	16.00" 406	24.00" 610	26.00" 660	0.500" 13
SHS-1700	17.00" 432	8.50" 216	17.00" 432	25.50" 648	27.50" 699	0.500" 13
SHS-1800	18.00" 457	9.00" 229	18.00" 457	27.00" 686	29.00" 737	0.500" 13

Dimension shown in **inches (bold)** and millimeters.
Thermal Maximum determined on a project basis.
SHD Series movement table identical.
When specifying slab-to-wall condition, add “C” after model number (eg. SHS-C-400).

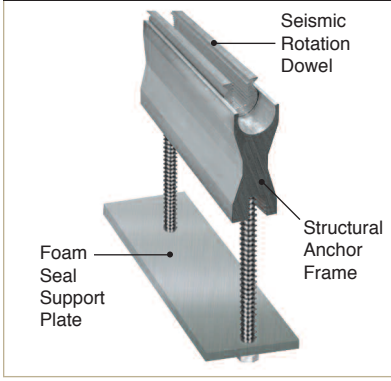


Model SHD

SHS Series - Single Seal System

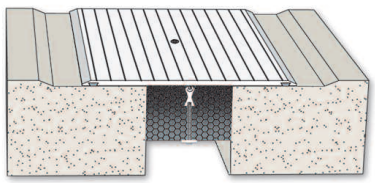


Seismic Assembly

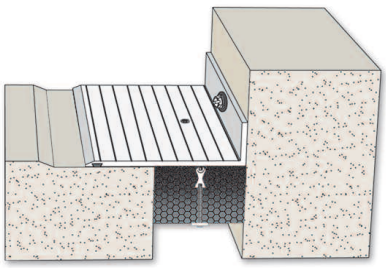


Self-Healing Monolithic Seal

- Single Seal Design with factory molded-in Seismic Assembly
- Integral “Self” Healing & Sealing Technologies
- Synthetic Puncture Resistant Monolithic Protection Barrier
- Self-Expanding Acrylic Impregnated Micro-cell Foam
- High Strength Epoxy Sidewall Adhesive



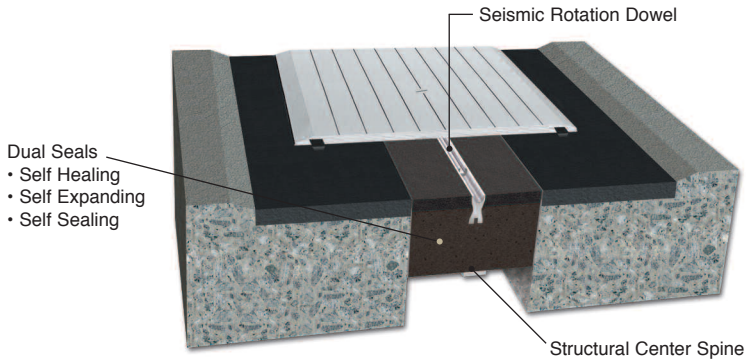
Model SHS
Slab-to-Slab / Movement 2" to 27"

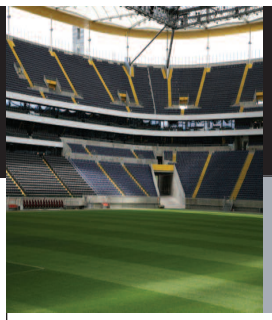


Model SHS-C
Slab-to-Wall / Movement 2" to 27"

NOTE: Contact MM Systems for project specific slide plate designs.

SHD Series - Dual Seal System





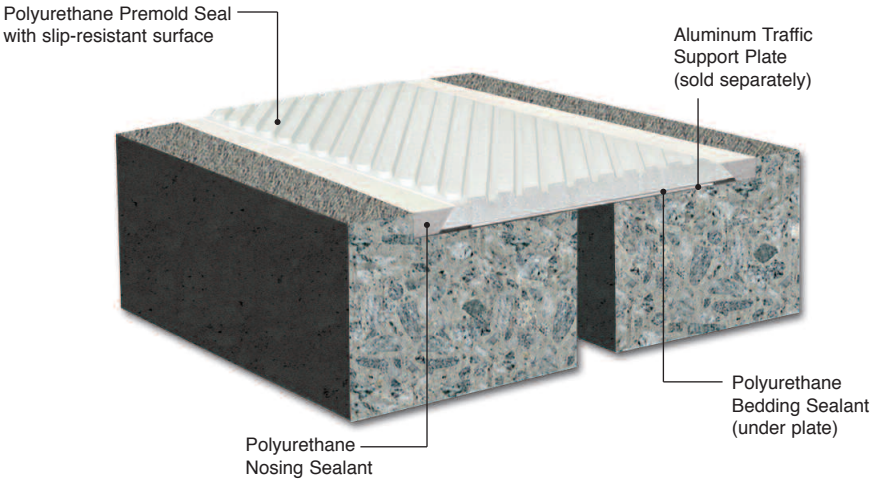
MM® Polyurethane Premold T-Joint System

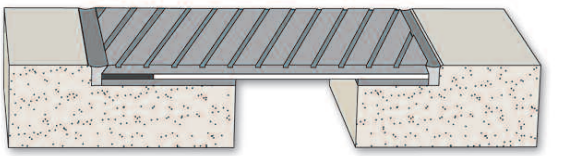
Performance Data

A factory cured polyurethane molded seal with a metal support plate designed for small movement expansion joints.

- Molded Seal profiles are ADA compliant and designed with a slip resistant textured surface.
- PPT Nosing Sealant - two-part, chemical cure, cold-applied, non-sag, traffic grade elastomeric sealant.
- Uniform thickness and flush surface.
- Molded Seal has a Shore A Hardness of 30± 5 with medium firmness and abrasion resistance.
- Zero recess design eliminates the collection of dirt or debris.
- Can be easily repaired and rebonded.
- PPT System is available in standard color gray.

Product Features



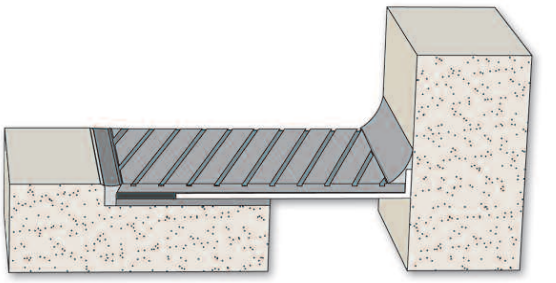


Model PPT
Slab-to-Slab / Movement .625" to 4.25"

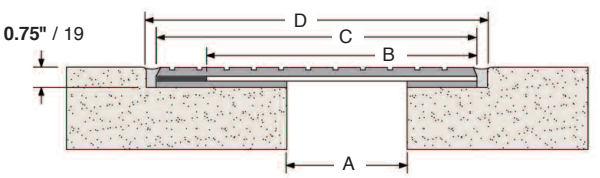
Movement Table

MODEL	Total Movement	Joint Opening "A" Min.	Joint Opening "A" Mid.	Joint Opening "A" Max.	Installation Range "A" Min.	Installation Range "A" Max.	Plate Size "B"	System Width "C"	Blockout Width "D"
PPT-40	0.75" 19	0.625" 16	1.00" 25	1.375" 35	0.625" 16	1.00" 25	3.5" X .06"	4.0" 102	5.0" 127
PPT-60	1.00" 25	1.00" 25	1.50" 38	2.00" 51	1.00" 25	1.50" 38	5.0" X .09"	6.0" 152	7.0" 178
PPT-80	1.50" 38	1.50" 38	2.25" 57	3.00" 76	1.50" 38	2.25" 57	6.5" X .09"	8.0" 203	9.0" 229
PPT-100	2.0" 51	2.00" 51	3.00" 76	4.00" 102	2.00" 51	3.00" 76	8.0" X .125"	10.0" 254	11.0" 279
PPT-120	2.5" 64	2.25" 57	3.50" 89	4.75" 121	2.25" 57	3.50" 89	9.5" X .125"	12.0" 305	13.0" 330

Dimension shown in **inches (bold)** and millimeters.
When specifying slab-to-wall condition, add "C" after the model number (eg. PPT-C-30)
Aluminum Traffic Support Plate sold separately.
Larger sizes available. Call MM Systems for details.



Model PPT-C
Slab-to-Wall / Movement .625" to 4.25"



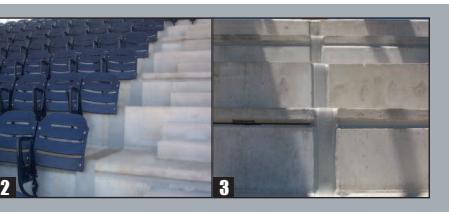
Model PPT

PROJECTS

1 Extra-Wide Seismic Application - Petco Park

2 Tread & Riser Transitions - Stadium Seating Bowl

3 Washington Nationals Stadium



MM® Flexible Gutter System

Performance Data

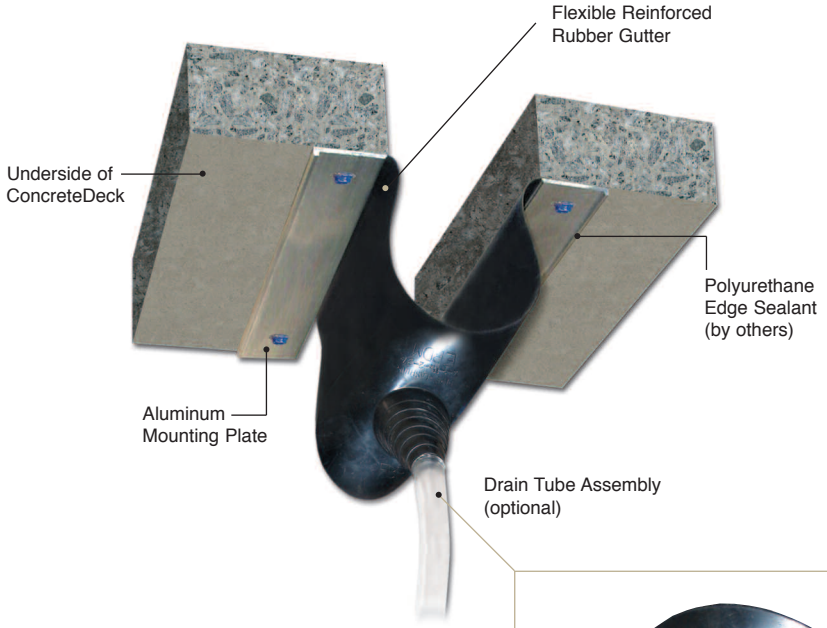
Flexible fabric-reinforced rubber gutter moisture collection system.

- Collects and moves water away from the expansion joint system.
- Rubber gutter is fabric reinforced to minimize material elongation.
- ±100% movement capability.
- Cost-effective solution for remedial repair of leaking expansion joint systems.
- Installed in blockouts or underslab conditions.

Product Features

SEISMIC DESIGN

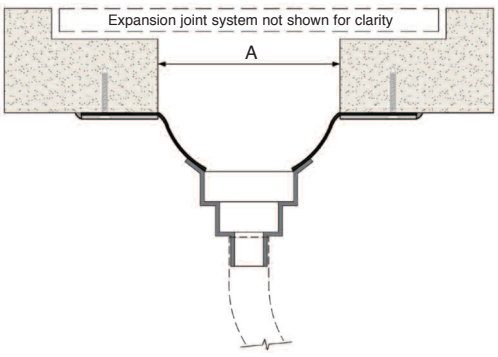
WATERPROOF SYSTEM



Movement Table

MODEL	Total Movement	Joint Opening "A" Minimum	Nominal	Maximum
FGS-12	**5.0"** 127	**0.00"** 0	**2.50"** 64	**5.00"** 127
FGS-18	**11.00"** 279	**0.00"** 0	**5.50"** 140	**11.00"** 279
FGS-24	**17.00"** 432	**0.00"** 0	**8.50"** 216	**17.00"** 432
FGS-30	**23.00"** 584	**0.00"** 0	**11.50"** 292	**23.00"** 584
FGS-36	**29.00"** 737	**0.00"** 0	**14.50"** 368	**29.00"** 737
FGS-42	**35.00"** 889	**0.00"** 0	**17.50"** 445	**35.00"** 889
FGS-48	**41.00"** 1041	**0.00"** 0	**20.00"** 508	**41.00"** 1041

Dimension shown in **inches (bold)** and millimeters.



Model FGS

PROJECTS

1. Fabric reinforced rubber strong enough to support a man.
2. FGS used in rehab projects to extend the service life of leaking expansion joints.
3. Fire Rated drain tube assemblies available when used with fire barriers.

MM® Elastoprene Compression Seals

Performance Data

Colored rubber multi-web seal profile accommodates expansion and compression.

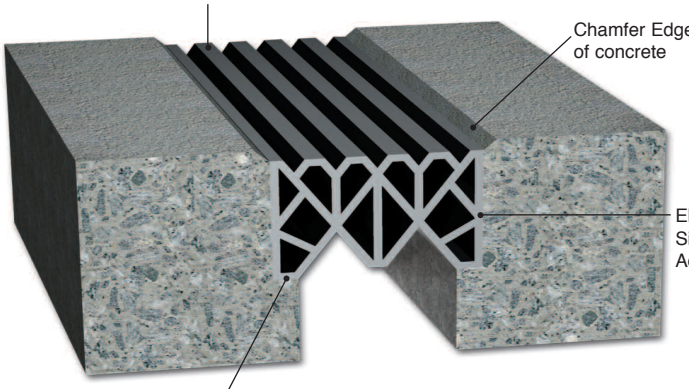
- No mechanical anchors or metal components.
- Splices can be heat welded or bonded with specialty adhesive.
- Seal profiles are ADA compliant and provide a smooth transition for pedestrian traffic areas.
- Model ECS available in continuous lengths for horizontal applications.
- Model VCS is a colored rubber low pressure seal for vertical applications.
- High abrasion and ultraviolet resistance.
- Cost effective and easy to install.

Product Features

Color Options

Black Gray Beige Custom

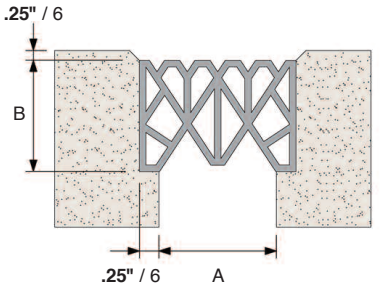
Elastoprene® Rubber Seal
- ADA Compliant
- Continuous seal with Color Options
- Model ECS for horizontal applications (shown below)



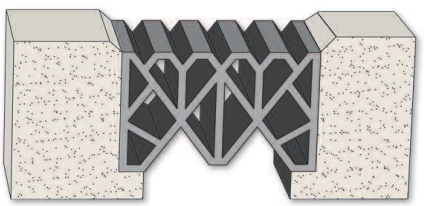
Movement Table

MODEL	Total Movement	Joint Opening "A" Min.	Joint Opening "A" Max.	Installation Width Min.	Installation Width Max.	Depth "B" Clearance
ECS-200	**0.87"** 22	**0.88"** 22	**1.75"** 44	**1.25"** 32	**1.75"** 44	**2.13"** 54
ECS-300	**1.75"** 44	**1.00"** 25	**2.75"** 70	**1.75"** 44	**2.75"** 70	**2.38"** 60
ECS-400	**2.63"** 67	**1.12"** 28	**3.75"** 95	**2.00"** 51	**3.75"** 95	**3.06"** 78
ECS-500	**3.50"** 89	**1.25"** 32	**4.75"** 121	**2.25"** 57	**4.75"** 121	**3.75"** 95
ECS-600	**4.25"** 108	**1.50"** 38	**5.75"** 146	**2.75"** 70	**5.75"** 146	**4.50"** 114
VCS-175	**1.00"** 25	**0.50"** 13	**1.50"** 38	**0.63"** 16	**1.50"** 38	**1.25"** 32
VCS-225	**1.37"** 35	**0.63"** 16	**2.00"** 51	**0.75"** 19	**2.00"** 51	**1.55"** 39
VCS-300	**2.13"** 54	**0.63"** 16	**2.75"** 70	**0.75"** 19	**2.75"** 70	**2.25"** 57

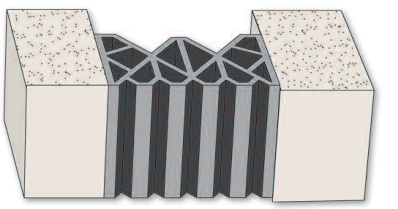
Dimension shown in **inches (bold)** and millimeters.



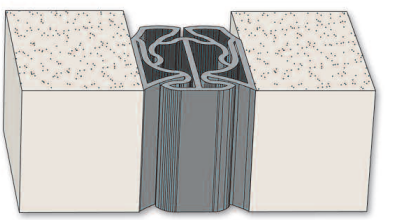
Model ECS



Model ECS / Horizontal
Slab-to-Slab / Movement .88" to 5.75"
(Heavy Duty)



Model ECS / Vertical
Wall-to-Wall / Movement .88" to 5.75"
(Heavy Duty)



Model VCS / Vertical
Wall-to-Wall / Movement .50" to 2.75"
(Standard Duty)

MM® Seismic Slide Plate Systems

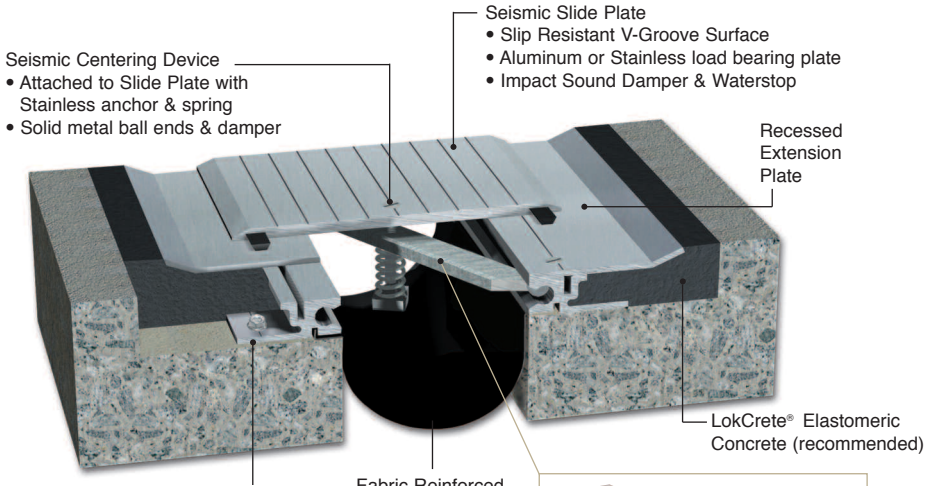
Performance Data

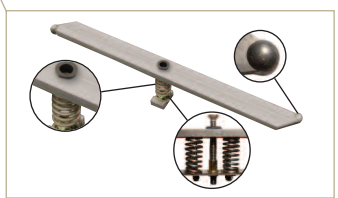
Heavy-duty metal slide plate system for wide joints with multi-directional movement.

- Load rated heavy-duty metal slide plate with impact and sound damper.
- Interlocking frame design insures proper alignment.
- Slide plate available in stainless steel and aluminum.
- For wide joints with multi-directional seismic movement.
- Seismic centering device with dynamic load impact damper.
- Recessed extension plates allow smooth slab-to-slab transition.

Product Features

SSP Series - Aluminum Seismic Slide Plate System



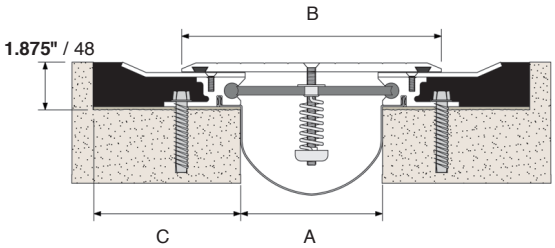


Seismic Centering Device

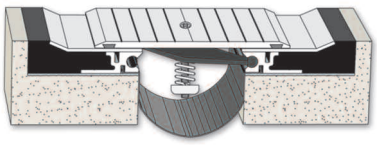
Movement Table

MODEL	Total Movement	Joint Opening "A" Minimum	Joint Opening "A" Nominal	Joint Opening "A" Maximum	Slide Plate "B"	Blockout "C"
SSP-400	**5.0"** 127	**1.0"** 25	**4.0"** 102	**6.0"** 152	**8.0"** 203	**4.5"** 114
SSP-600	**8.0"** 203	**1.0"** 25	**6.0"** 152	**9.0"** 229	**11.0"** 279	**5.5"** 140
SSP-800	**11.0"** 279	**1.0"** 25	**8.0"** 203	**12.0"** 305	**14.0"** 356	**6.5"** 165
SSP-1000	**14.0"** 356	**1.0"** 25	**10.0"** 254	**15.0"** 381	**17.0"** 432	**7.5"** 191
SSP-1200	**17.0"** 432	**1.0"** 25	**12.0"** 305	**18.0"** 458	**20.0"** 508	**8.5"** 216
SSP-C-400	**3.25"** 83	**1.75"** 44	**4.0"** 102	**5.0"** 127	**5.5"** 140	**4.5"** 114
SSP-C-600	**5.75"** 146	**1.75"** 44	**6.0"** 152	**7.5"** 191	**8.0"** 203	**5.5"** 140
SSP-C-800	**8.25"** 210	**1.75"** 44	**8.0"** 203	**10.0"** 254	**10.5"** 267	**6.5"** 165
SSP-C-1000	**10.75"** 273	**1.75"** 44	**10.0"** 254	**12.5"** 318	**13.0"** 330	**7.5"** 191
SSP-C-1200	**13.25"** 337	**1.75"** 44	**12.0"** 305	**15.0"** 381	**15.5"** 394	**8.5"** 216

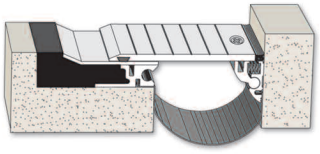
Dimension shown in **inches (bold)** and millimeters.
Larger sizes available. Call MM Systems for details.
SSS and **STS Series** movement tables identical.
See web site for Model **SNB Series** dimensions.



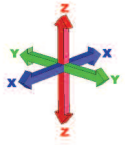
Model SSP



Model SSP
Recessed/Slab-to-Slab
Movement 1.0" to 18"



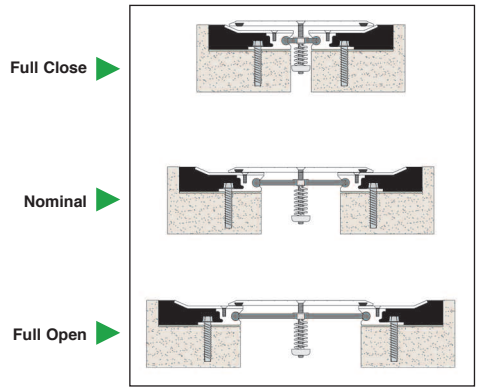
Model SSP-C
Recessed/Slab-to-Wall
Movement 1.75" to 15"



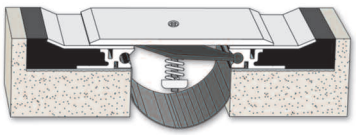
Seismic Movement Capability

X-Axis - Expansion & Contraction
Y-Axis - Lateral Shear
Z-Axis - Vertical Displacement

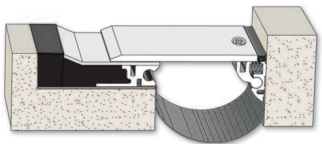
Seismic Displacement



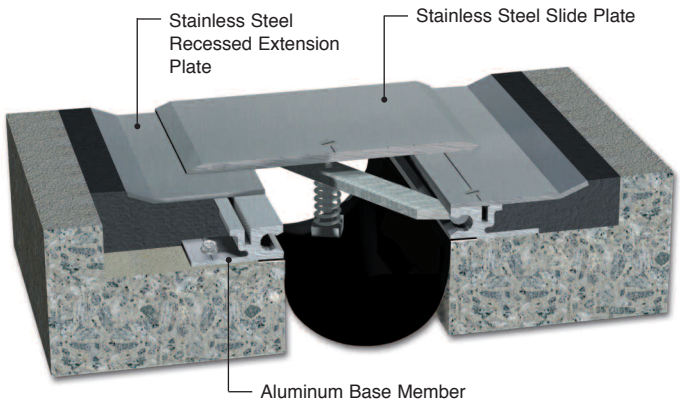
SSS Series - Stainless Seismic Slide Plate System



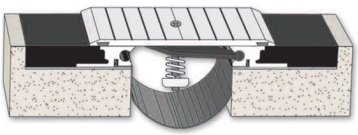
Model SSS
Recessed/Slab-to-Slab
Movement 1.0" to 18"



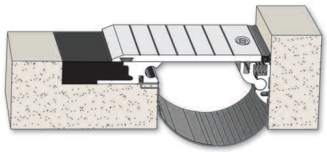
Model SSS-C
Recessed/ Slab-to-Wall
Movement 1.75" to 15"



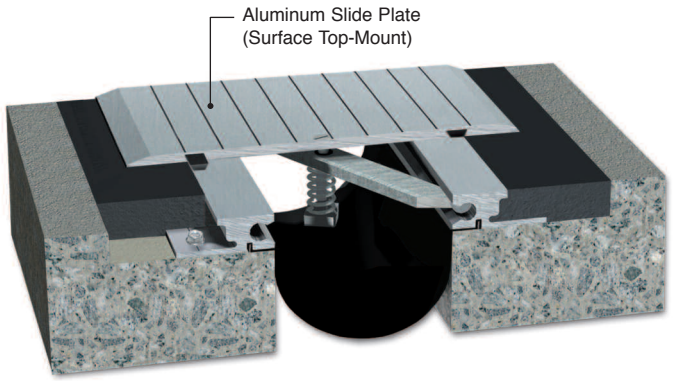
STS Series - Seismic Top-Mount Slide Plate System



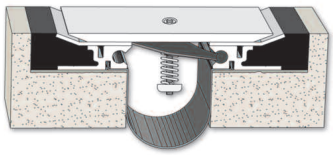
Model STS
Top Mount/Slab-to-Slab
Movement 1.0" to 18"



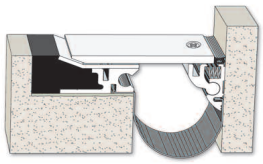
Model STS-C
Top Mount/Slab-to-Wall
Movement 1.75" to 15"



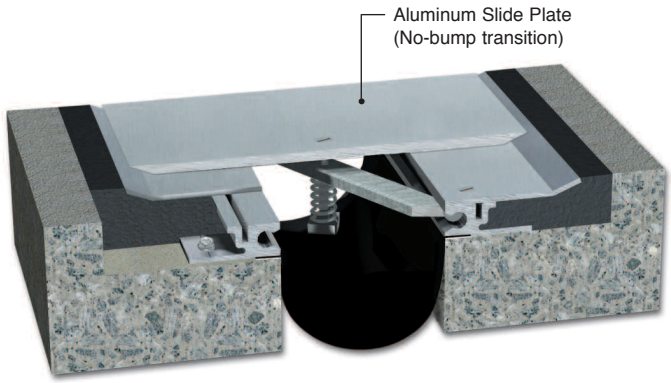
SNB Series - Seismic No-Bump Slide Plate System



Model SNB
Slab-to-Slab
Thermal Movement
Seismic Movement 18" Max.



Model SNB-C
Slab-to-Wall
Thermal Movement
Seismic Movement 15" Max.



Note: Limited thermal movement engineered for climate controlled interior environments.

PROJECTS

1 Meadowlands Garage, NJ SSP with Elevated Wash

2 Toronto Pearson International Airport, with asphalt overlay.

3 Front Street Garage CT, with brick pavers.

Seismic designs reduce the risk of catastrophic structural damage

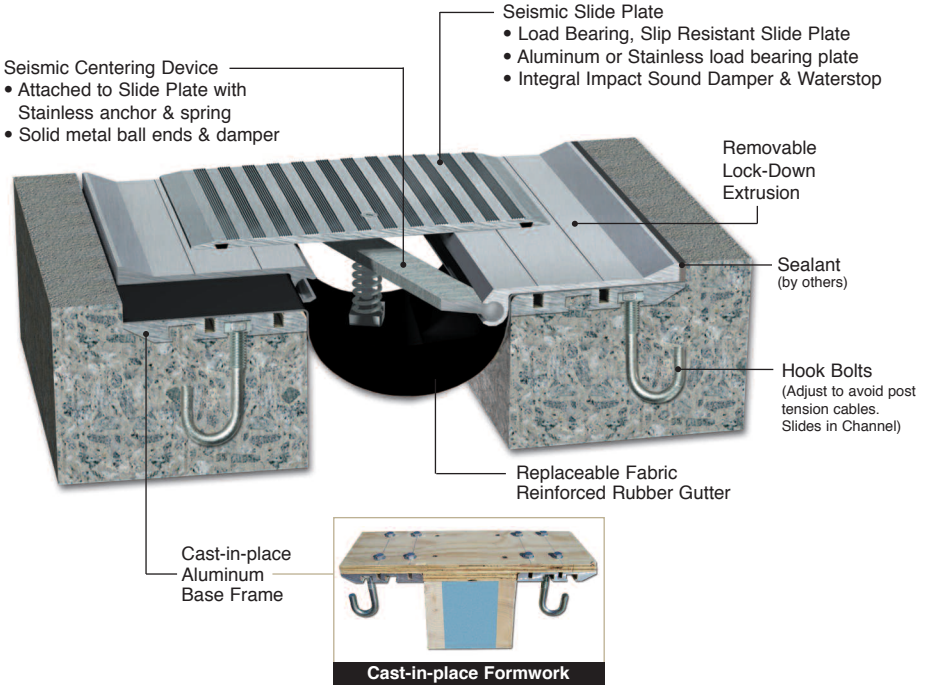
MM® Cast-In Seismic System

Performance Data

Cast-in-place heavy-duty metal seismic system for post-tensioned concrete decks.

- Cast-in design eliminates need for blockouts and associated structural repairs.
- High strength hook bolts adjust around post tension cables.
- Slide plate incorporates high-density elastoprene impact and sound dampers.
- Seismic centering device with dynamic load impact dampers.
- Replaceable fabric reinforced rubber waterproofing gutter.
- Cast-In design eliminates slab-to-slab vertical offsets.
- ADA compliant slide plate with slip resistant finish.

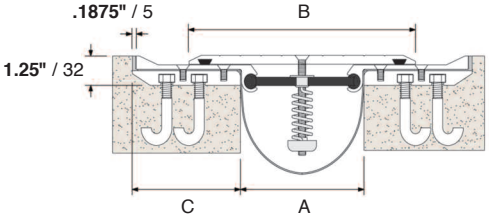
Product Features



Movement Table

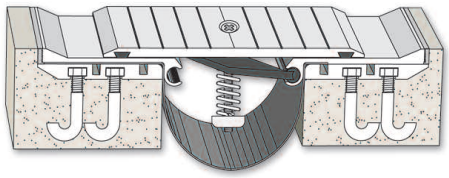
MODEL	Total Movement	Joint Opening "A" Min.	Joint Opening "A" Max.	Slide Plate "B"	Base Width "C"
CIS-400	**3.5"** 89	**2.5"** 64	**6.0"** 152	**8.0"** 203	**5.25"** 133
CIS-600	**6.5"** 165	**2.5"** 64	**9.0"** 229	**11.0"** 279	**5.25"** 133
CIS-800	**9.5"** 241	**2.5"** 64	**12.0"** 305	**14.0"** 356	**7.25"** 184
CIS-1000	**12.5"** 318	**2.5"** 64	**15.0"** 381	**17.0"** 432	**7.25"** 184
CIS-1200	**15.5"** 394	**2.5"** 64	**18.0"** 457	**20.0"** 508	**7.25"** 184
CIS-C-400	**2.5"** 64	**2.5"** 64	**5.0"** 127	**5.5"** 140	**5.25"** 133
CIS-C-600	**5.0"** 127	**2.5"** 64	**7.5"** 191	**8.0"** 203	**5.25"** 133
CIS-C-800	**7.5"** 191	**2.5"** 64	**10.0"** 254	**10.5"** 267	**7.25"** 184
CIS-C-1000	**10.0"** 254	**2.5"** 64	**12.5"** 318	**13.0"** 330	**7.25"** 184
CIS-C-1200	**12.5"** 318	**2.5"** 64	**15.0"** 381	**15.5"** 394	**7.25"** 184

Dimension shown in **inches (bold)** and millimeters.
Larger sizes available. Call MM Systems for details.
BIS & BIS-C Series movement tables identical.

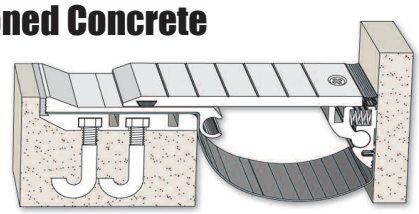


Model CIS

CIS Series / Cast-In / Post Tensioned Concrete

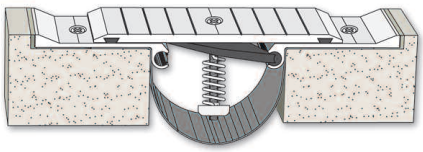


Model CIS
Slab-to-Slab / Movement 2.5" to 15.0"
Cast-in-Place Design

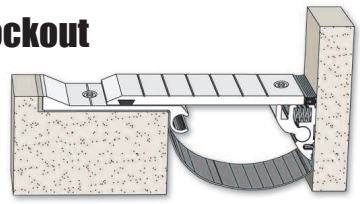


Model CIS-C
Slab-to-Wall / Movement 2.5" to 12.5"
Cast-in-Place Design

BIS Series / Bolt-In / Recessed Blockout



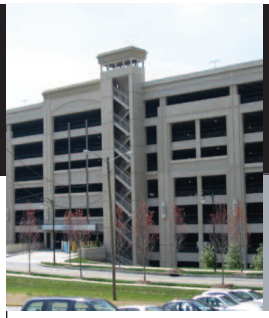
Model BIS
Slab-to-Slab / Movement 2.5" to 15.0"
Bolt-In Seismic Low Profile Design



Model BIS-C
Slab-to-Wall / Movement 2.5" to 12.5"
Bolt-In Seismic Low Profile Design

PROJECTS

1. Boston Airport (Before) Terminal to Roadway
2. Boston Airport (After) Terminal to Roadway CIS-SSM Custom Design
3. Sacramento Airport Installation of Seismic Slide Plate



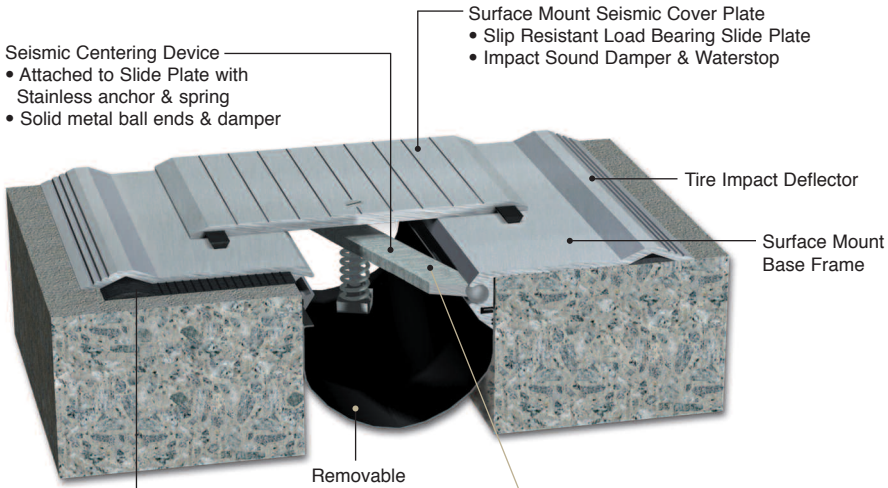
MM® Surface Mount Seismic Cover System

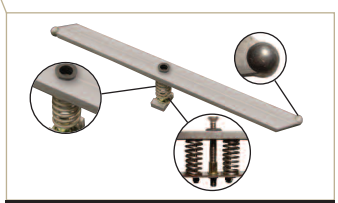
Performance Data

Heavy-duty surface mounted seismic metal cover for wide joints without blockouts.

- No blockout design is ideal for new and retrofit construction.
- Load rated heavy-duty metal slide plate with impact and sound dampener.
- Seismic centering device with dynamic load impact dampener.
- Aluminum base member incorporates tire impact deflection design.
- Available with optional LokCrete® Bedding Compound.
- Integral fabric reinforced rubber waterproofing gutter.
- ADA compliant slide plate with slip resistant surface.

Product Features



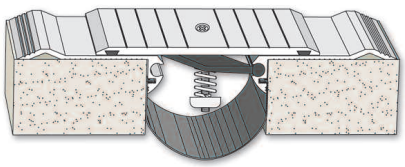


Seismic Centering Device

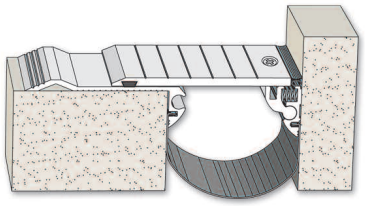
Movement Table

MODEL	Total Movement	Joint Opening "A" Seismic Min.	Joint Opening "A" Thermal Min.	Joint Opening "A" Seismic Max.	Slide Plate "B"	Base Member "C"
SMS-400	**4.0"** 102	**2.0"** 51	**2.0"** 51	**6.0"** 152	**8.0"** 203	**6.375"** 162
SMS-600	**6.0"** 152	**2.0"** 51	**3.0"** 76	**9.0"** 229	**11.0"** 279	**6.375"** 162
SMS-800	**8.0"** 203	**2.0"** 51	**4.0"** 102	**12.0"** 305	**14.0"** 356	**8.375"** 213
SMS-1000	**10.0"** 254	**2.0"** 51	**5.0"** 127	**15.0"** 381	**17.0"** 432	**8.375"** 213
SMS-1200	**12.0"** 305	**2.0"** 51	**8.0"** 203	**18.0"** 457	**20.0"** 508	**8.375"** 213
SMS-C-400	**3.0"** 76	**1.0"** 25	**2.0"** 51	**5.0"** 127	**5.5"** 140	**6.375"** 162
SMS-C-600	**4.5"** 114	**1.0"** 25	**3.0"** 76	**7.5"** 191	**8.0"** 203	**6.375"** 162
SMS-C-800	**6.0"** 152	**1.0"** 25	**4.0"** 102	**10.0"** 254	**10.5"** 267	**8.375"** 213
SMS-C-1000	**7.5"** 191	**1.0"** 25	**5.0"** 127	**12.5"** 318	**13.0"** 330	**8.375"** 213
SMS-C-1200	**9.0"** 229	**1.0"** 25	**8.0"** 203	**15.0"** 381	**15.5"** 394	**8.375"** 213

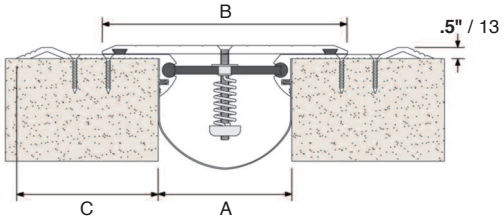
Dimension shown in **inches (bold)** and millimeters.
Larger sizes available. Call MM Systems for details.
Contact MM Systems for stainless steel slide plate models.



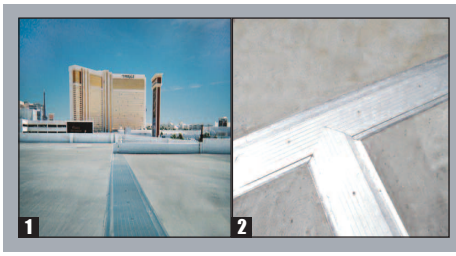
Model SMS
Slab-to-Slab / Movement 2.0" to 15.0"



Model SMS-C
Slab-to-Wall / Movement 2.0" to 12.5"



Model SMS

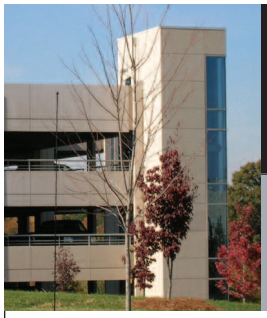


PROJECTS

1 Fashion Show Mall, Las Vegas

2 "T" Transition Multi-Directional Movement

3 Seismic Centering Devices for Slide Plate Systems



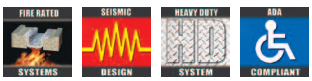
MM® Hinged Safety Cover System

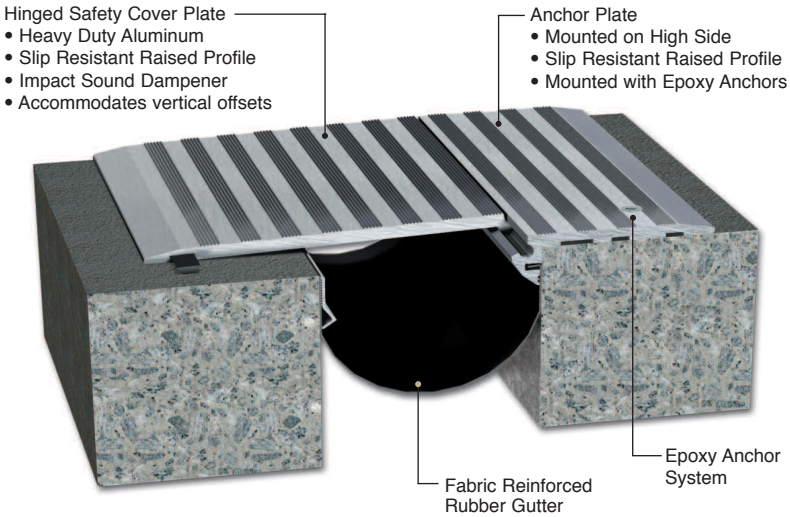
Performance Data

Aluminum cover with integral hinge to accommodate vertical offsets in concrete decks.

- Load rated heavy-duty aluminum slide plate with impact and sound dampener.
- Hinge design accommodates vertical offsets in concrete decks.
- Integral fabric reinforced rubber waterproofing gutter.
- Available with optional LokCrete® Bedding Compound.
- ADA compliant design with slip resistant raised pattern surface.

Product Features

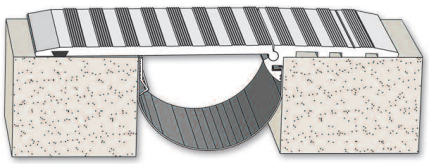




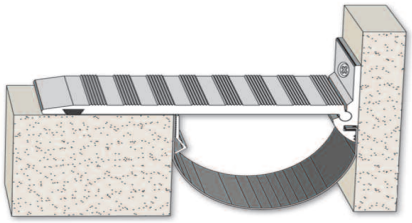
Movement Table

MODEL	Total Movement	Joint Opening "A" Minimum	Joint Opening "A" Nominal	Joint Opening "A" Maximum	System Width "B"
HSC-200	**2.0"** 51	**1.0"** 25	**2.0"** 51	**3.0"** 76	**8.8"** 224
HSC-400	**5.0"** 127	**1.0"** 25	**4.0"** 102	**6.0"** 152	**12.0"** 305
HSC-600	**8.0"** 203	**1.0"** 25	**6.0"** 152	**9.0"** 229	**15.0"** 381
HSC-1200	**17.0"** 432	**1.0"** 25	**12.0"** 305	**18.0"** 457	**25.0"** 635
HSC-C-200	**2.0"** 51	**1.0"** 25	**2.0"** 51	**3.0"** 76	**4.10"** 104
HSC-C-400	**5.0"** 127	**1.0"** 25	**4.0"** 102	**6.0"** 152	**7.25"** 184
HSC-C-600	**8.0"** 203	**1.0"** 25	**6.0"** 152	**9.0"** 229	**10.25"** 260
HSC-C-1200	**17.0"** 432	**1.0"** 25	**12.0"** 305	**18.0"** 457	**19.75"** 502

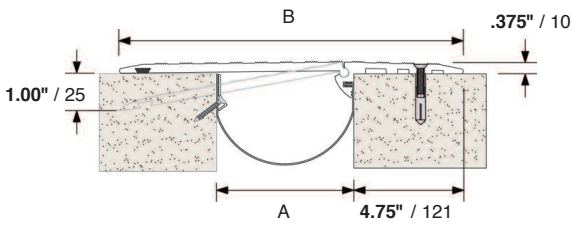
Dimension shown in **inches (bold)** and millimeters.
Larger sizes available. Call MM Systems for details.



Model HSC
Slab-to-Slab / Movement 1.0" to 15.0"



Model HSC-C
Slab-to-Wall / Movement 1.0" to 15.0"



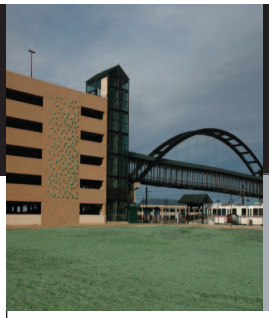
Model HSC

PROJECTS

1 Marta Station Parking Deck, Denver

2 Bridge Application

3 HSS System "Z" Joint Transition



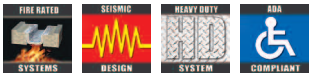
MM® Rubber Safety Cover System

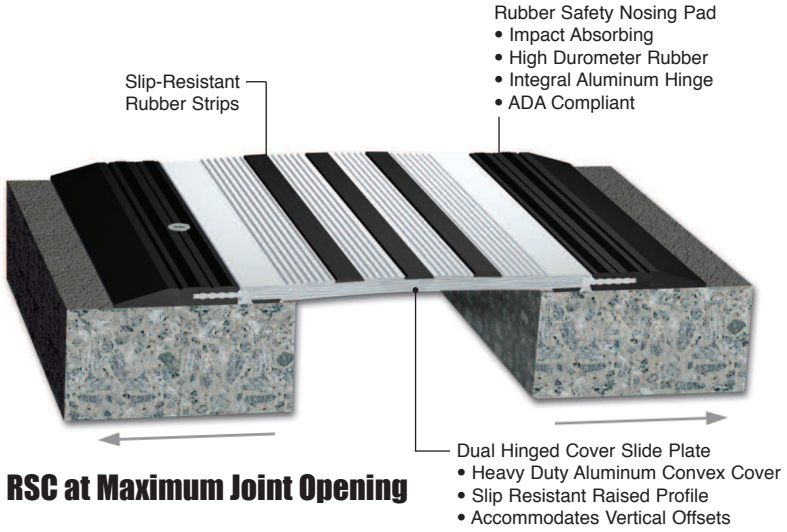
Performance Data

Dual hinged aluminum cover with impact absorbing rubber nosing pads that accommodates vertical offsets in concrete decks.

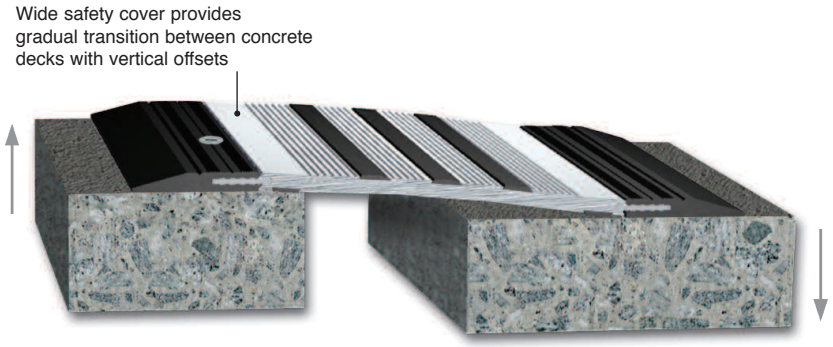
- For covering expansion joints openings with recessed joint systems or fillers.
- Ideal for high traffic pedestrian areas.
- Safety Cover with rubber impact/nosing pads that flex independently.
- Rated for low speed vehicular traffic.
- Heavy-duty convex shaped aluminum cover with raised slip-resistant pattern.
- Integral slip-resistant rubber safety strips.
- Provides smooth transition between uneven surfaces.
- Convex aluminum cover accommodates greater vertical offsets.
- Complies with ADA guidelines

Product Features





RSC at Maximum Joint Opening

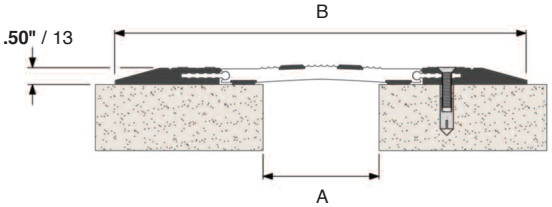


RSC at Maximum Vertical Offset

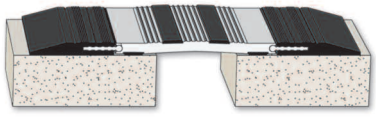
Movement Table

MODEL	Load Rating	Total Movement	Joint Opening "A" Thermal Min.	Joint Opening "A" Nominal	Joint Opening "A" Thermal Max.	System Width "B"
RSC-400	Vehicular	**4.0"** 102	**0"** 0	**2.0"** 51	**4.0"** 102	**12.64"** 321
RSC-850	Vehicular	**7.5"** 191	**0"** 0	**4.0"** 102	**7.5"** 191	**17.0"** 432
RSC-850	Pedestrian	**8.0"** 203	**0"** 0	**4.0"** 102	**8.0"** 203	**17.0"** 432
RSC-C-400	Vehicular	**4.0"** 102	**0"** 0	**2.0"** 51	**4.0"** 102	**9.68"** 246
RSC-C-850	Vehicular	**7.5"** 191	**0"** 0	**4.0"** 102	**7.5"** 191	**13.06"** 332
RSC-C-850	Pedestrian	**8.0"** 203	**0"** 0	**4.0"** 102	**8.0"** 203	**13.06"** 332

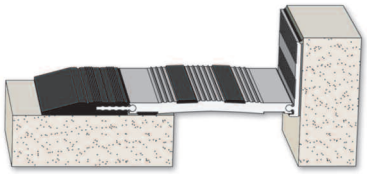
Dimension shown in **inches (bold)** and millimeters.



Model RSC



Model RSC
Vehicular Slab-to-Slab / Movement 0" to 7.5"
Pedestrian Slab-to-Slab / Movement 0" to 8.5"



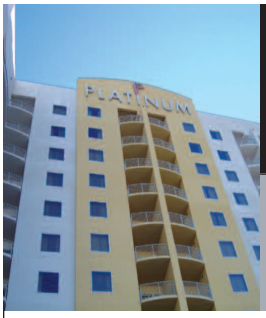
Model RSC-C
Pedestrian Slab-to-Slab / Movement 0" to 8.5"

PROJECTS

1 ADA Compliant High Volume Pedestrian Applications

2 Vehicular Rated Design

3 Rubber Safety Nosing Pads provide a smooth deck-to-deck transition



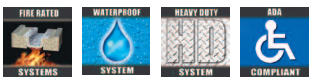
MM® Impact Damping Systems

Performance Data

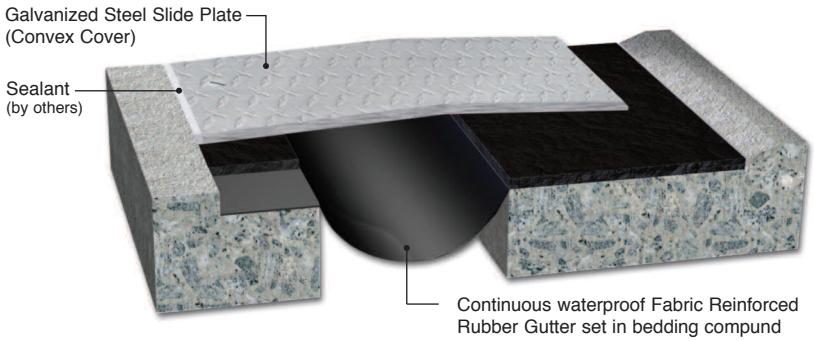
Galvanized or Aluminum cover epoxy anchored on one side with impact absorbing rubber base pads and fabric reinforced rubber gutter.

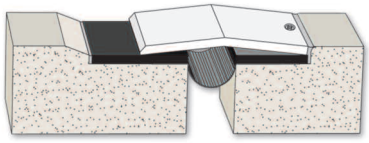
- Load rated heavy-duty aluminum or galvanized steel slide plate.
- EPDM Rubber base pads absorb vehicular impact loads.
- Fabric reinforced rubber waterproofing gutter with optional drain tube assembly.
- Anchored with epoxy bonded insert anchors and stainless steel bolts.
- GID crowned slide plate or AID flat recessed slide plate.

Product Features

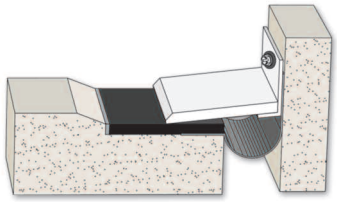


GID - Galvanized Impact Damping System





Model GID
Slab-to-Slab / Movement 1.0" to 15.0"

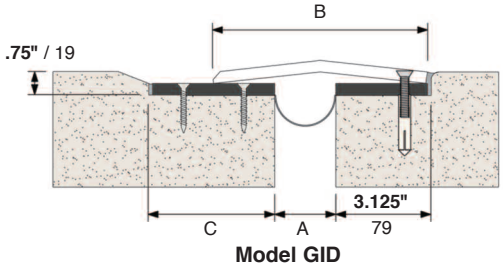


Model GID-C
Slab-to-Wall / Movement 1.0" to 15.0"

Movement Table

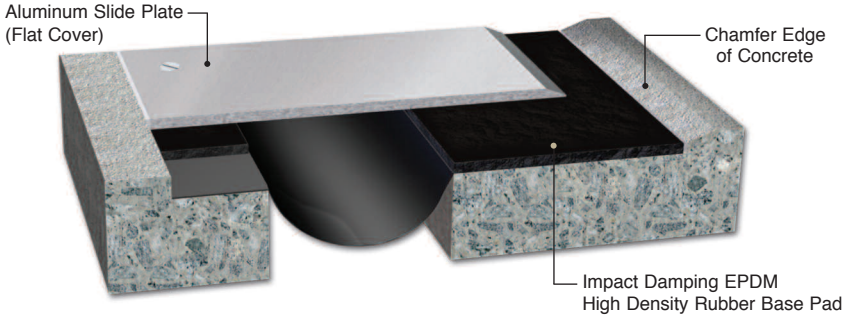
MODEL	Total Movement	Joint Opening "A" Thermal Min.	Nominal	Thermal Max.	Cover "B"	Block Out "C"
GID-200	**2.0"** 51	**1.0"** 25	**2.0"** 51	**3.0"** 76	**7.0"** 178	**4.125"** 105
GID-300	**3.0"** 76	**1.5"** 38	**3.0"** 76	**4.5"** 114	**8.5"** 216	**5.125"** 130
GID-400	**4.0"** 102	**2.0"** 51	**4.0"** 102	**6.0"** 152	**10.0"** 254	**6.125"** 156
GID-500	**5.0"** 127	**2.5"** 64	**5.0"** 127	**7.5"** 191	**11.5"** 292	**7.125"** 181
GID-600	**6.0"** 152	**3.0"** 76	**6.0"** 152	**9.0"** 229	**13.0"** 330	**8.125"** 206
GID-700	**7.0"** 178	**3.5"** 89	**7.0"** 178	**10.5"** 267	**14.5"** 368	**9.125"** 232
GID-800	**8.0"** 203	**4.0"** 102	**8.0"** 203	**12.0"** 305	**16.0"** 406	**10.125"** 257
GID-900	**9.0"** 229	**4.5"** 114	**9.0"** 229	**13.5"** 343	**17.5"** 445	**11.125"** 283
GID-1000	**10.0"** 254	**5.0"** 127	**10.0"** 254	**15.0"** 381	**19.0"** 483	**12.125"** 308

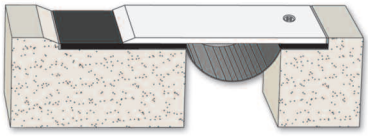
Joint Opening "A" can close to 0" during a seismic event.
Dimension shown in **inches (bold)** and millimeters.
When specifying slab-to-wall condition, add "C" after model number (eg. AID-C-200 or GID-C-200).
AID movement table identical.



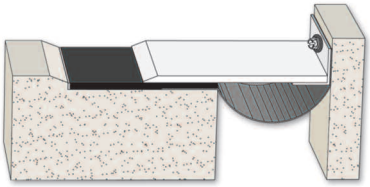
Model GID

AID - Aluminum Impact Damping System

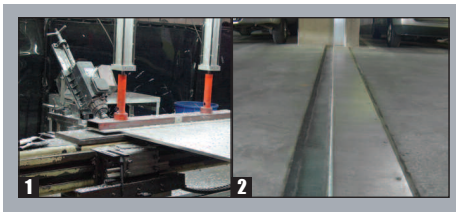




Model AID
Slab-to-Slab / Movement 1.0" to 15.0"

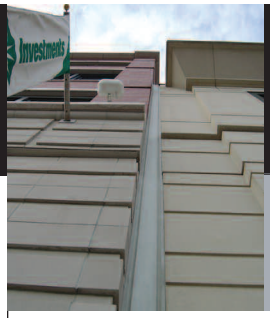


Model AID-C
Slab-to-Wall / Movement 1.0" to 15.0"



PROJECTS

1. MM machining center for custom slide plate designs
2. Platinum Garage - AID System with LokCrete Nosing
3. Slab-to-Wall Condition AID System



MM® Vertical Seismic Sealing System

Performance Data

Vertical watertight seismic seal snap-locked into two aluminum frames.

- No visible aluminum or hardware.
- Engineered for multi-directional seismic movement.
- Visual seals are available in standard and custom colors.
- Resistant to UV, ozone, acid rain, most chemicals and extreme temperatures.
- Splices can be heat welded or bonded with specialty adhesive.
- Continuous lengths in most applications.

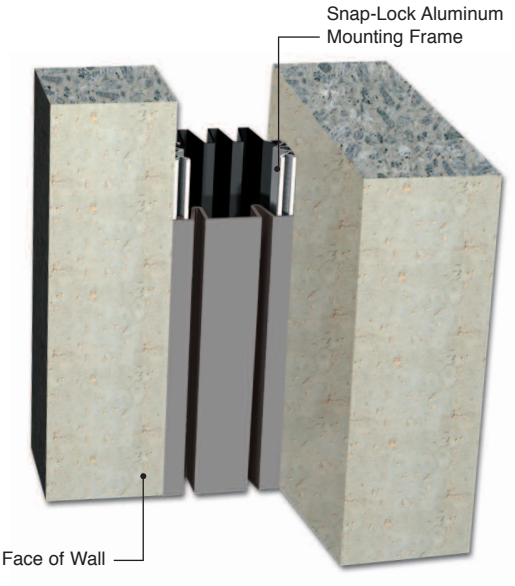
Product Features

Color Options

Black Gray Beige Custom

VSS - Wall to Wall

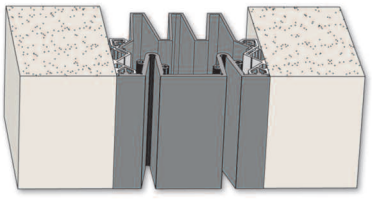
VSS - Wall Corner



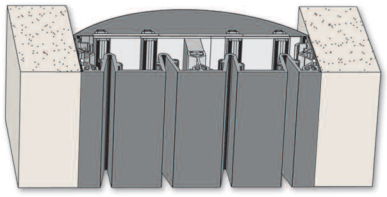
Movement Table

MODEL	Total Thermal Movement	Joint Opening "A" Min.	Joint Opening "A" Max.	Seismic Max "A"	Installation Midpoint
VSS-200	1.75" 44	1.25" 32	3.00" 76	10.00" 250	2.00" 51
VSS-300	3.25" 83	1.25" 32	4.50" 114	10.00" 250	3.00" 76
VSS-400	4.25" 108	1.75" 44	6.00" 152	10.00" 250	4.00" 102
VSS-500	5.75" 146	1.75" 44	7.50" 191	17.00" 432	5.00" 127
VSS-600	7.25" 184	1.75" 44	9.00" 229	17.00" 432	6.00" 152
VSS-700	8.00" 203	4.00" 102	12.00" 305	18.00" 457	7.00" 178
VSS-800	8.00" 203	4.00" 102	12.00" 305	18.00" 457	8.00" 203
VSS-900	11.00" 279	4.00" 102	15.00" 381	24.00" 610	9.00" 229
VSS-1000	11.00" 279	4.00" 102	15.00" 381	24.00" 610	10.00" 254

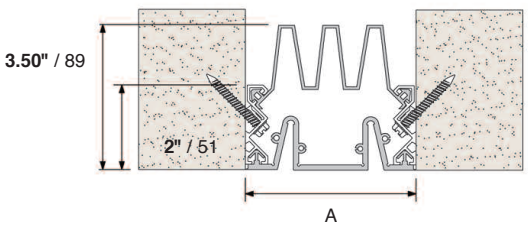
Dimension shown in **inches (bold)** and millimeters.
Larger sizes available. Call MM Systems for details.



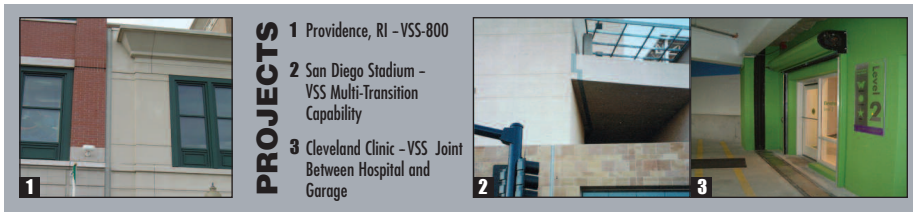
Model VSS
Wall-to-Wall / Thermal
Nominal Joint Openings 2" to 6"
Movement 1.25" to 17"



Model VSS
Wall-to-Wall / Seismic
Nominal Joint Openings 7" to 10"
Movement 4" to 24"



Model VSS
(200 - 600)



MM® ColorJoint / ESS Series

Performance Data

Engineered seismic silicone sealant factory bonded to a rectangular polyurethane backer support system.

- Silicone sealing system conforms to irregular openings and is watertight, dust-proof, airtight and soundproof.
- Preformed silicone strip bonded to a rectangular polyurethane backer support system.
- 3-sided bonding of seal with a primerless one-part silicone sealant.
- 1/2" thick silicone strip virtually eliminates possibility of punctures.
- Non flammable and resistant to UV, ozone, wind driven rain and extreme temperatures.
- Easy to install, no fasteners or anchors.
- Available with a 5-year warranty through Certified Contractor Network.

Product Features

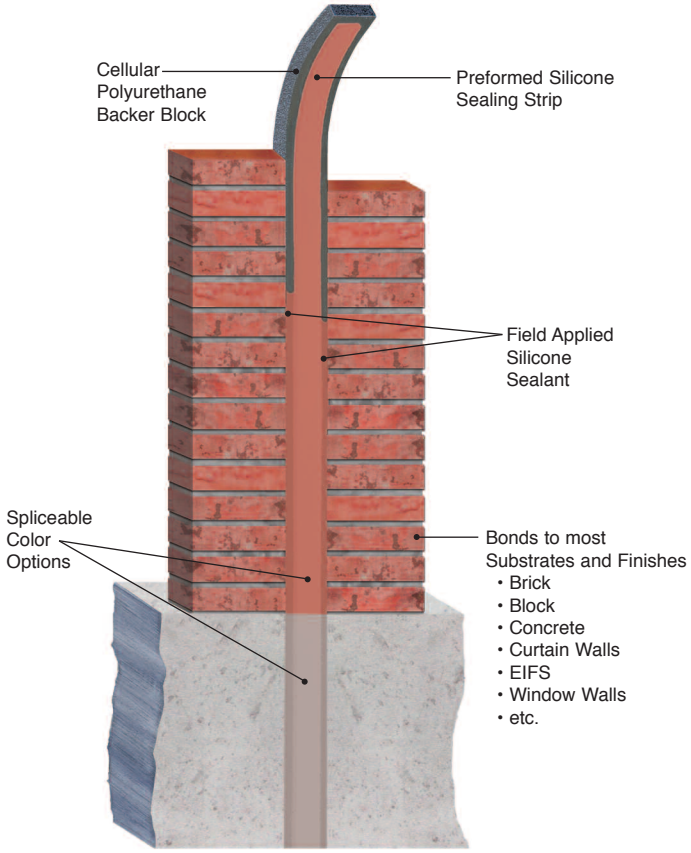
ESS - Engineered Seismic Silicone Sealing System (Vertical)

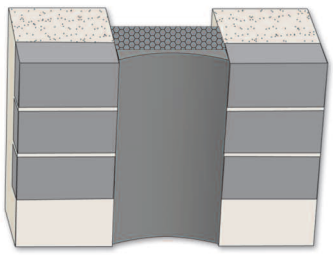
Standard Colors (Stock)

- White
- Precast White
- Off White
- Limestone
- Aluminum Stone
- Bronze
- Black

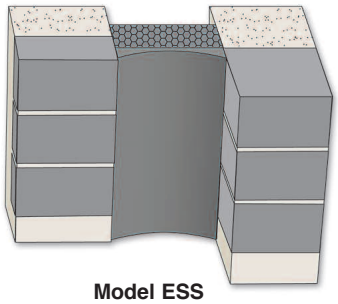
Custom Colors

- Anodized Aluminum
- Gray
- Sandstone
- Ivory
- Champagne
- Buff
- Light Bronze
- Dusty Rose
- Adobe Tan
- Rustic Brick
- Blue Spruce
- Charcoal
- Dark Bronze





Model ESS
Wall-to-Wall / Movement .50" to 10.5"
Wall Corner Condition Similar

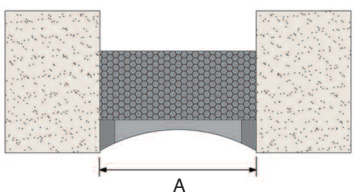


Model ESS
Slab-to-Slab / Movement .50" to 10.5"
(May require a cover plate - not shown)
Slab-to-Wall Condition Similar

Movement Table

MODEL	Total Movement	Joint Opening "A" Min.	Joint Opening "A" Max.	Installation Range "A" Min.	Installation Range "A" Max.
ESS-100	1.00" 25	0.50" 13	1.50" 38	0.75" 19	1.375" 35
ESS-150	1.50" 38	0.75" 19	2.25" 57	1.25" 32	1.875" 48
ESS-200	2.00" 51	1.00" 25	3.00" 76	1.50" 38	2.375" 60
ESS-250	2.50" 64	1.25" 32	3.75" 95	2.00" 51	2.875" 73
ESS-300	3.00" 76	1.50" 38	4.50" 114	2.50" 64	3.375" 86
ESS-350	3.50" 89	1.75" 44	5.25" 133	3.00" 76	3.875" 98
ESS-400	4.00" 102	2.00" 51	6.00" 152	3.50" 89	4.375" 111
ESS-450	4.50" 114	2.25" 57	6.75" 171	4.00" 102	4.875" 124
ESS-500	5.00" 127	2.50" 64	7.50" 191	4.50" 114	5.375" 137
ESS-600	6.00" 152	3.00" 76	9.00" 229	5.50" 140	6.375" 162
ESS-700	7.00" 178	3.50" 89	10.50" 267	6.50" 165	7.375" 187

Dimension shown in **inches (bold)** and millimeters.
Larger sizes available. Call MM Systems for details.



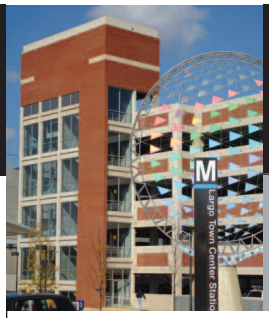
Model ESS

PROJECTS

1 ColorJoint ESS in EIFS Application

2 ColorJoint ESS in Brick Application

3 University of Massachusetts Secondary Waterproofing Seal Application



MM® ColorJoint / SIF Series

Performance Data

Seismic silicone face seal factory applied to polyurethane microcell foam impregnated with a waterproof polymer sealing compound.

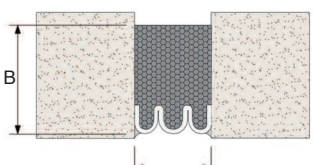
- ± 50% seismic movement capability with near zero tensile stress at bond line.
- Conforms to irregular openings virtually eliminating the risk of costly water damage.
- Binary silicone seal and impregnated foam nearly eliminates possibility of punctures.
- Permanently elastic and will expand and accommodate the required joint movement.
- Watertight, dust-proof, airtight, soundproof seal resilient and flexible to -39°F.
- Provides interior vapor, dust, acoustical, air and sound-dampening control.

Product Features

Movement Table

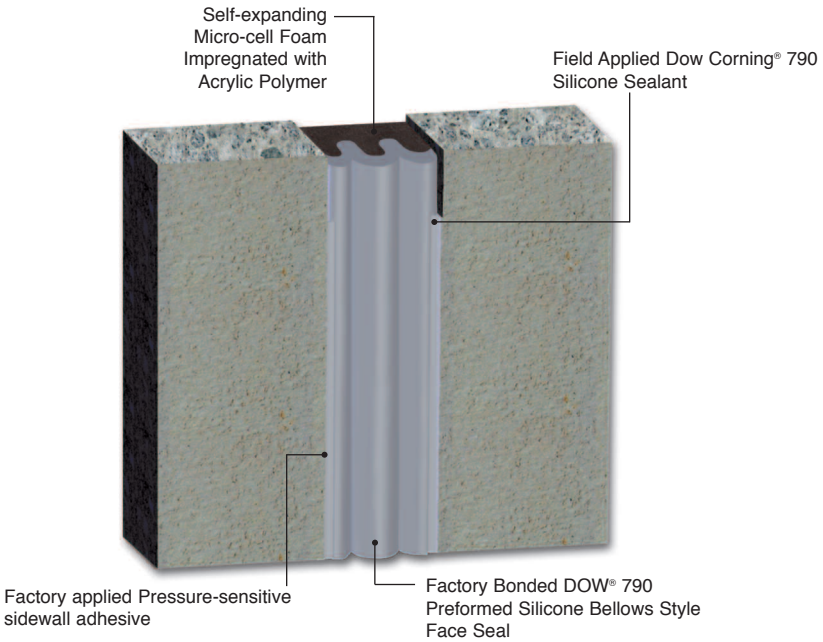
MODEL	Total Movement	Movement Range "A" Min.	Movement Range "A" Max.	Expansion Joint Size Nominal	Expansion Joint Size Seal Depth "B"
SIF-050	0.50" 13	0.250" 6	0.750" 19	0.50" 13	1.50" 38
SIF-063	0.63" 16	0.312" 8	0.938" 24	0.63" 16	1.50" 38
SIF-075	0.75" 19	0.375" 10	1.125" 29	0.75" 19	1.50" 38
SIF-100	1.00" 25	0.500" 13	1.500" 38	1.00" 25	2.00" 51
SIF-125	1.25" 32	0.625" 16	1.875" 48	1.25" 32	2.00" 51
SIF-150	1.50" 38	0.750" 19	2.250" 57	1.50" 38	2.00" 51
SIF-175	1.75" 44	0.875" 22	2.625" 67	1.75" 44	2.00" 51
SIF-200	2.00" 51	1.00" 25	3.00" 76	2.00" 51	3.00" 76
SIF-225	2.25" 57	1.125" 29	3.375" 86	2.25" 57	3.00" 76
SIF-250	2.50" 64	1.250" 32	3.750" 95	2.50" 64	3.00" 76
SIF-275	2.75" 70	1.375" 35	4.150" 105	2.75" 70	3.00" 76
SIF-300	3.00" 76	1.500" 38	4.500" 114	3.00" 76	3.00" 76
SIF-325	3.25" 83	1.562" 40	4.812" 122	3.25" 83	3.00" 76
SIF-350	3.50" 89	1.750" 44	5.250" 133	3.50" 89	3.00" 76
SIF-375	3.75" 95	1.875" 48	5.625" 143	3.75" 95	4.00" 102
SIF-400	4.00" 102	2.00" 51	6.00" 152	4.00" 102	4.00" 102
SIF-500	5.00" 127	2.50" 64	7.50" 191	5.00" 127	4.00" 102
SIF-600	6.00" 152	3.00" 76	9.00" 229	6.00" 152	4.00" 102
SIF-700	7.00" 178	3.50" 89	10.50" 267	7.00" 178	5.00" 127
SIF-800	8.00" 203	4.00" 102	12.00" 305	8.00" 203	5.00" 127

Dimension shown in **inches (bold)** and millimeters.

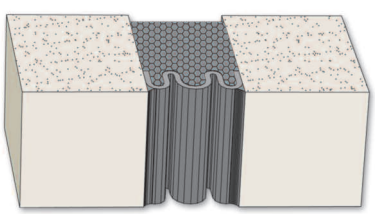


Model SIF

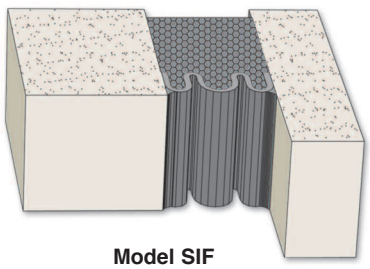
SIF - Seismic Silicone & Impregnated Foam System (Vertical)



DOW® 790 is a registered trademark of Dow Corning

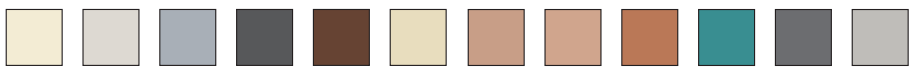


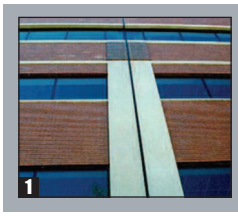
Model SIF
Wall-to-Wall / Movement .25" to 12.0"



Model SIF
Wall Corner / Movement .25" to 12.0"

Colors





PROJECTS

1. Accommodates Variable Substrates - Precast, Window Wall and Brick
2. Narrow Sight Line Design Makes ColorJoint SIF Nearly Invisible
3. St. Paul's Travelers Insurance Project

MM® Pyro-Flex Fire Barrier Systems

Performance Data

Fire barrier systems with thermal, seismic and lateral shear capability. Used in conjunction with expansion joint systems.

Endurance:
- 1, 2, 3 and 4 Hour Ratings Available

Maximum Openings:
- Up to 48" and larger

Performance Standards:
- UL 2079-Class I, II and III
- ASTM E-119
- ASTM E-1966
- ASTM E-1399

Code Compliance:
- UBC, SBC, BOCA, IBC, CAN-S101, ICC-ES

Testing / Listing Agencies:
- Intertek Laboratories (Includes Omega Point Lab)
- Underwriters Laboratories

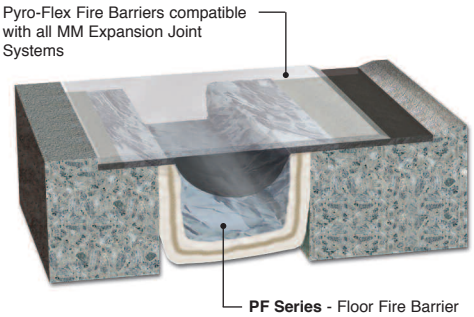
Tested Performance Criteria:
- Preconditioned cycle testing up to 5000 cycles for seismic movement
- Superimposed loading including hose stream
- Positive pressure
- Factory and field splices/transitions
- Air leakage/smoke migration
- Seismic lateral shear
- Coverless applications

Availability:
- For hourly ratings and movement ranges, contact MM Systems.

ICBO Evaluation Service

Pyro-Flex / Blockout Floor / PF Series

High performance continuous floor fire barrier system that maintains a seal to prevent smoke and fire spread when used with any floor expansion joint system.

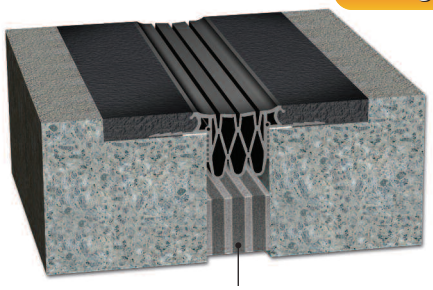


PF Series - Floor Fire Barrier
- Thermal, Seismic and Shear Movement Designs Available
- Caulkless Design
- Foil and Refractory Matrix

Pyro-Flex Block / PFB Series

Low profile, high performance, fire retardent foam matrix and intumescent fireproofing composite provides additional clearance for any expansion joint system.

Coming Soon



PFB Series - Floor Fire Barrier
- AccomodatesThermal, Seismic and Shear Movement
- Fire Retandent Foam Matrix and Intumescent Fireproofing composite

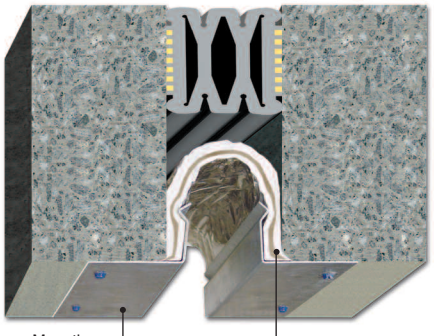
Pyro-Flex / Vertical Wall

Coverless wall fire barrier system that maintains a seal to prevent smoke and fire spread when used for chase conditions, elevator shafts or other areas with access from only one side.

PF Series - Wall Fire Barrier / Single side
- Foil and Refractory Matrix
- Caulkless Design
- Accommodates Smoke and Cycle Codes

Pyro-Flex / Underslab / UPF Series

The industries' first fully rated floor fire barrier that can be installed from the underside of the concrete floor that allows and does not interfere with waterproofing expansion joint systems installed on the topside.

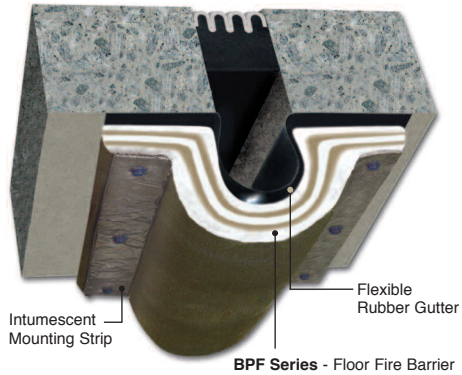


UPF Series - Floor Fire Barrier
- Thermal, Seismic and Shear Movement Designs Available
- Caulkless Design
- Foil and Refractory Matrix

NOTE: Underslab Fire Barrier System can be used with any expansion joint system

Pyro-Flex / Below Slab / BPF Series

The first fire barrier that installs directly to the underside of the shallow concrete deck allowing ample room for expansion joint installation.



BPF Series - Floor Fire Barrier
- Thermal, Seismic and Shear Movement Designs Available
- Caulkless Design
- Foil and Refractory Matrix

Important Considerations When Specifying & Selecting Fire-Rated Joints...

1 Movement Criteria

Fire Barriers must accommodate the same types and amount of movement that the associated Expansion Joint Systems are designed for. Movement types include thermal, wind, multi-directional shear and seismic. Movement Ranges are typically plus or minus 50% of nominal for thermal movement and up to plus or minus 100% for seismic applications.

2 Ratings Requirements

Fire Barrier endurance ratings are specified in hourly increments of one to four hours. Fire-Rated assemblies are a combination of Fire Barrier, Expansion Joint Covers and adjacent construction. Ratings are categorized as F (Flame), T (Thermal), or L (Air Leakage).

3 Code Compliance

National and local building codes have changed substantially in recent years. Rated designs must include the surrounding substrate materials. Once an isolated code requirement,Fire-Rated Barriers for Movement Joints are now commonplace in project specifications. MM has been a participant in the code development process for more than 25 years. We can help clarify the requirements for your specific project.

4 Testing / Listing Credentials

Code compliant Fire Barriers must meet or exceed national or international standards established by laboratories such as Intertek ETL SEMKO, or Underwriter's Laboratories. Fire Barriers should carry a listing label, indicating adherence to the stringent standards set forth by an accredited agency.

5 Liability Risk / Installer Credentials

Fire Barriers are a life-safety component of the structure. Accepting anything less than a single source supplier and factory trained installer may increase your liability risk. You should select products that meet code and are independently tested to the highest standards. Call (866) 506-6929 for a no-nonsense perspective on how to avoid the liability risk.

MM® Systems Product Line

Expansion Joints / Architectural

ej^a 07 95 00

Aesthetics, innovation and durability are the hallmark of MM's line of floor, wall, ceiling and roof joint cover systems. Engineered systems include features that are ADA compliant, fire-rated, no-bump and heavy-load designs capable of thermal, seismic and wind-sway movement.

Expansion Joints / Parking and Stadiums

ej^p 07 95 00

High performance joint sealing systems designed to meet the rigorous demands of parking structures, stadiums and other open-air structures. Engineered options include systems that are waterproof, fire-rated, ADA compliant, and capable of thermal, shear and seismic movement.

Expansion Joints / Seismic

ej^s 07 95 00

Engineered especially for new and retrofit base-isolated structures, seismically designed, code-compliant systems provide fire-rated passage between structures before, during and after seismic events. Engineered features include multi-directional movement capability including rotation in Z axis (vertical shear). Services include design/build and design assist.

Expansion Joints / Fire Rated / Safety

fb 07 95 00

Fire barrier systems engineered and tested to current standards and code requirements. Ratings include 2, 3 and 4-hour endurance. Seismic fire barriers accommodate multi-directional movement including longitudinal sheer. Vertical and horizontal systems include chase and plenum designs. Factory approved transitions insure continuity of rating throughout the structure.

Architectural Metalwork

am 05 58 00

Engineered and fabricated to exacting tolerances, architectural metalwork by MM is available in a variety of materials and finishes. Column covers, beam wraps, light coves, sun screens or your unique designs become signature elements of your project. Choose from unlimited Kynar 500® / Hylar 5000® color coatings.

Trench Grating and Access Covers

ta 05 53 00

ADA compliant grating and trench cover systems. Decorative gratings offer an architectural alternative to traditional cast-iron gratings and are ideal for pool and plaza decks, green spaces and fountain surrounds. Removable access covers allow access to in-floor electrical and refrigeration services. Optional trench liners provide an exit path for moisture.

Certified Representative

MM SYSTEMS
50 MM Way • P.O. Box 98 • Pendergrass, GA 30567
Toll Free: 866.50MMWAY (866.506.6929)
Tel: 706.824.7500 Fax: 706.824.7501

Direct Link to EJp www.mm-ejp.com
Web Site www.mmsystemscorp.com
Call Toll Free 866.506.6929

One or more of the following patents may cover products in this catalog: 3,624,973; Re27,761; 3,738,068; 3,862,531;Re.28,870; 3,974,609; 4,063,396; 4,156,993; 4,241,549; 4,271,651; 4,403,458; 4,404,777; 4,512,127; 4,545,162; 4,616,460; 4,625,485; 4,651,488; 4,674,252; 4,708,517; 4,743,036; 4,815,247; 4,916,878; 4,943,605; 4,965,976; 5,575,126; 5,706,611; 5,862,631; 5,867,944; 5,875,598; 5,950,378; D300,465; (Other Patents Pending)

¿QUÉ NECESITA SABER PARA ELEGIR LA JUNTA ADECUADA?

PREGUNTAS FUNDAMENTALES QUE SE TIENE QUE PLANTEAR

- **¿Qué anchura tiene la abertura de la junta?**
- **¿Cuál es el movimiento calculado que tendrá la estructura?**:
  -MOVIMIENTO HORIZONTAL -MOVIMIENTO VERTICAL
- **¿Necesita estanqueidad al agua** (por ejemplo, aparcamientos subterráneos)**?**
- **¿Qué tipo de suelo va a colocar?**
- **¿Qué tipo de colocación necesita?**
  -ENRASADA -SUPERPUESTA (REVESTIMIENTOS YA COLOCADOS).
- **¿Qué espesor tiene el revestimiento (h)?** (para juntas enrasadas)
- Capacidad de carga necesaria. **¿Qué tipo de transporte pasará por encima?**
- **¿La junta estará en el exterior o el interior del edificio?**

¡Consúltenos y con gusto le atenderemos!