

Maurer System™ Swivel Expansion Joint Assembly by The D.S. Brown Company

Conventional large movement expansion joint devices, such as D.S. Brown's Steelflex® Modular Expansion Joint System, are limited to primarily longitudinal movements and/or less than ± 0.79 inches (20mm) transverse displacement. For joint locations which produce more demanding structural movements, the Maurer System™ Swivel Expansion Joint Assembly by The D.S. Brown Company is provided in the U.S.A. through an exclusive license agreement with Maurer Söhne, Munich, Germany. Typical applications include:

- Long-span structures
- Structures located in seismic zones
- Curved structures
- Structures with differential longitudinal movements or differential vertical movements
- Structures with anticipated substructure settlement

Performance Features

By utilizing a common-to-all centerbeam swiveling support bar, the Maurer System™ Swivel Expansion Joint Assembly is able to accommodate large longitudinal displacements (X), extensive transverse displacements (Y), and vertical displacements (Z), as well as vertical rotations (Φ_x , Φ_y) of up to 10 degrees. The centerbeams are free to slide on swiveling support bars, which provide equidistant control for centerbeams without the limitations of typical mechanical control devices. To ensure long-term performance, all Maurer System™ Swivel Expansion Joint Assemblies are designed and fabricated using fatigue-resistant connection details. For assistance with selecting the appropriate size patented Maurer System™ Swivel Expansion Joint Assembly by The D.S. Brown Company, please contact D.S. Brown.

Seismic Movement Capability

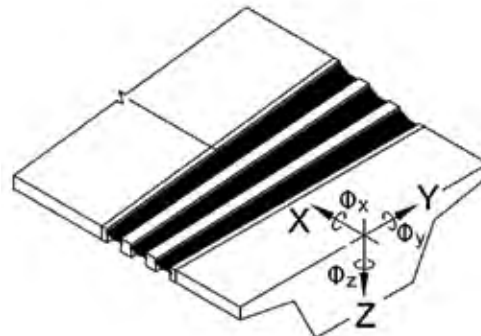
Dynamic tests conducted at the University of California at Berkeley subjected the Maurer System™ Swivel Expansion Joint Assembly to high-velocity seismic displacements. This first-of-its-kind test program included velocities of more than 40 inches per second (1015mm/sec) in both longitudinal and transverse directions. The successful test results proved the unique capabilities of this patented device in seismic applications.



Lacey V. Murrow Floating Bridge, Seattle, WA, USA



Dynamic Testing, University of California, Berkeley, CA, USA



Multi-Directional Movement Capabilities

Maurer System™ Swivel Expansion Joint Systems

Continued

New Tacoma Narrows Bridge Tacoma, Washington, USA

Owner: Washington State Department of Transportation

Product Provided: Maurer Systems™ Swivel Expansion Joint Assemblies by The D.S. Brown Company

Quantity: 143 LF

Joint Size(s): DS-1520

Longest Span: 2,800 FT

Total Span Length: 5,979 FT



San Francisco Oakland Bay Bridge San Francisco, California, USA

Owner: California Department of Transportation

Joint Size(s):

DS-560 (MR=775mm)

Product Provided: Maurer Systems™ Swivel Expansion Joint Assemblies by The D.S. Brown Company

DS-800 (MR=1220mm)

DS-960 (MR=1275mm)

DS-1040 (MR=1125mm)

Quantity: 1042 LF



Homer M. Hadley Memorial Floating Bridge (I-90) Seattle, Washington, USA

Owner: Washington State Department of Transportation

Product Provided: Maurer Systems™ Swivel Expansion Joint Assemblies by The D.S. Brown Company

Quantity: 215 LF

Joint Size(s): DS-1200

Longest Span:

Total Span Length: 5,811 FT



Bridges

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