

**KANSAS DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION TO THE
STANDARD SPECIFICATIONS, 2015 EDITION**

SECTION 1720

MODULAR EXPANSION DEVICES

1720.1 DESCRIPTION

This specification covers providing a prefabricated modular expansion device on bridges in accordance with these specifications. The device includes the entire manufactured product (multiple sealing elements, steel edge beams and separation beams, joint armoring and attachments, support bars, support boxes and all parts) as well as all attached components. When shown in the Contract Documents, drains at the ends of the devices are subsidiary to the modular expansion devices.

1720.2 REQUIREMENTS

a. Unless shown otherwise in the Contract Documents, provide one of the prequalified brands and models that will accommodate the total design movement shown in the Contract Documents. All modular expansion devices for any single structure must be provided by one supplier.

b. Shape the device to comply closely to the cross slope. Field cutting of the device will not be permitted.

c. Use steel for all major metal components.

d. Use neoprene (Polychloroprene) complying with ASTM D 2628 for the elastomeric sealing units/elements unless modified otherwise by the supplier on the shop drawings. Make the elements one-piece full length of the expansion device, including curbs, and as detailed in the Contract Documents.

e. After installation, there may be no appreciable change in the surface of the modular expansion device when the bridge expands and contracts.

f. Submit shop drawings as specified in **DIVISION 700**.

g. All welding used in the fabrication of modular expansion devices shall conform to **SECTION 744**.

1720.3 TEST METHODS

Compliance with approved shop drawings for the assembly. Use ASTM D 2628 for the neoprene.

1720.4 PREQUALIFICATION

The design of all modular expansion devices must be prequalified as a unit. Manufacturers wishing to supply modular expansion devices to KDOT projects must send a complete evaluation package including all design and testing information to the KDOT Bureau of Structural and Geotechnical Services. The information will be reviewed and the manufacturer will be notified of the results. Those systems that are satisfactory for use will be placed on a prequalified list maintained by the Bureau of Construction and Materials.

Notify the Bureau of Structural and Geotechnical Services of any changes to the prequalified design. The manufacturer will be notified if the change requires a complete re-submittal for review and evaluation of the revised design or product.

1720.5 BASIS OF ACCEPTANCE

Prequalification as specified in **subsection 1720.4**.

Receipt and approval of a Type C certification as specified in **DIVISION 2600**, stating the product was fabricated to the same design using the same materials as pre-qualified.

Receipt and approval of Type A certification as specified in Division 2600 for all metal components used in the fabrication of the expansion devices delivered to the project.

Visual inspection for delivery condition, and quality of workmanship, including conformance with the shop drawings.

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