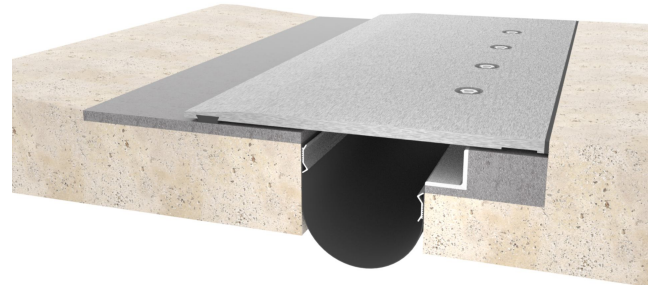


# Wabo<sup>®</sup> BusTuff

## Parking Series

Heavy Duty Expansion Control System for use in High Load, High Speed, High Daily Traffic Count Applications  
**US Patent No. 8,267,617**

Features	Benefits
<ul style="list-style-type: none"> <li>Design Longevity</li> </ul>	Structural elements designed for infinite fatigue life. Maintenance free, structural steel components
<ul style="list-style-type: none"> <li>Unique Anchorage System</li> </ul>	Fastening system engineered to secure cover plate under any conditions; displacements and rotations
<ul style="list-style-type: none"> <li>Sound Attenuation</li> </ul>	Engineered to completely eliminate cover plate noise using <b>QuietRide™</b> technology
<ul style="list-style-type: none"> <li>Easy Install</li> </ul>	Lane-by-lane installation of plates promotes simple process



### KEY FEATURES:

- Engineered to completely eliminate cover plate noise using QuietRide™ technology
- Structural elements designed for infinite fatigue life resulting in a truly maintenance free expansion joint system
- Easy to install design for lane-by-lane installation to limit lane restrictions on any project.
- High strength steel fastening system engineered to secure cover plates under any applied load condition, relative deck displacement, and rotation.
- Fly-in/elevated bridge structures at Public Transportation facilities
- Airport Terminal Pickup Locations in proximity to buses
- New construction and staged construction rehabilitation projects
- Horizontal use, high speed, high vehicle weight, and high daily traffic count applications

### DESCRIPTION:

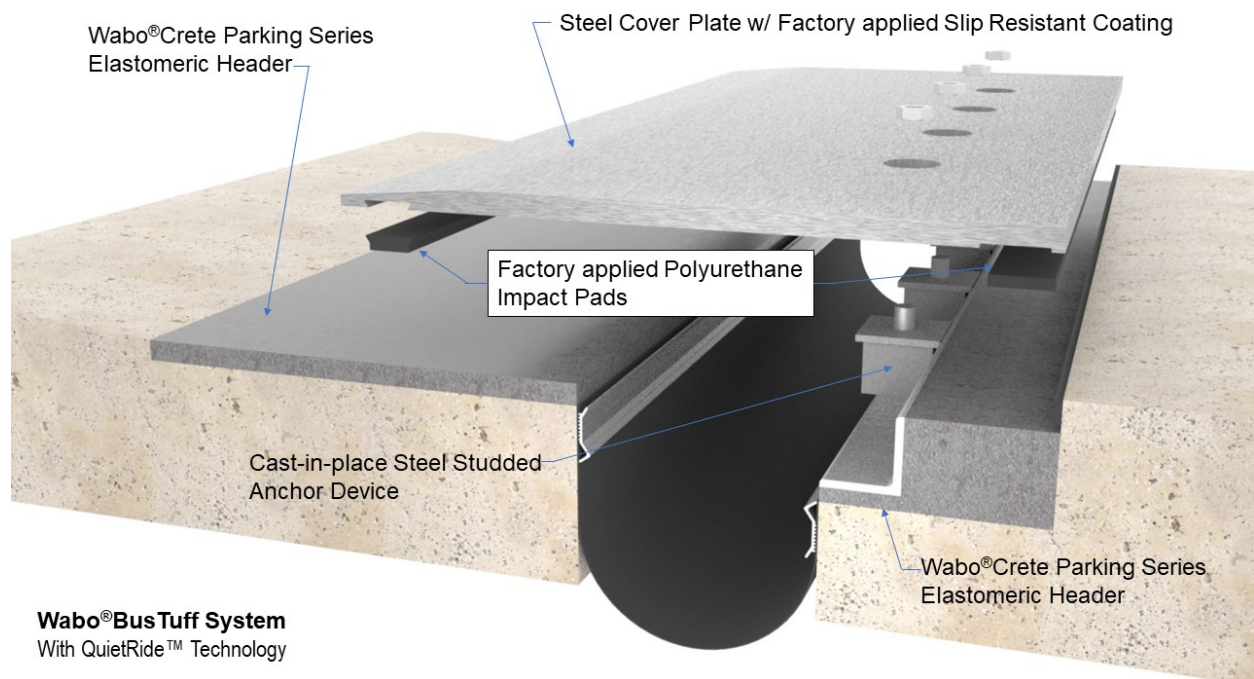
Wabo<sup>®</sup>BusTuff is a rugged and reliable expansion joint system specifically designed to accommodate high load, high speed, high daily traffic count parking deck challenges. The system absorbs impact, can carry axle loads up to and including 40,000 pounds, 30% horizontal impact forces created by vehicles traveling at high speeds across the system, and slab movements in all directions while eliminating failure modes most often associated with plate-type systems in high daily traffic count locations. This system has also been designed and tested to withstand the most demanding seismic events resulting in the most fully functional expansion joint system in the marketplace.

## PACKAGING/COVERAGE:

- Steel cover plates and system components packaged as kits for easy installation.
- Optional drain trough can be shipped in continuous lengths up to 50'-0".
- Bolt Hole cavities are sealed with Wabo®Crete Parking Series Elastomeric Concrete
- Wabo®Crete Parking Series Elastomeric Concrete:
  - Part A – ½ gal container
  - Part B – 1 gal container
  - Part C – 60 lbs aggregate
  - A+B+C = 1 unit
  - 1 unit = 0.6 ft<sup>3</sup> (1030 in<sup>3</sup>)

## TECHNICAL DATA:

Each Wabo®BusTuff expansion control system is specifically designed to suit the most demanding project conditions. Considerations for use are high loads (vehicles higher in weight than passenger vehicles and pickup trucks), vehicles traveling at speeds in excess of 15 miles per hour, transitions in elevation across opposing decks, and locations where large vehicle count per day exists. Watson Bowman Acme Corp technical staff can provide the highly skilled engineering services required to transform design considerations, joint opening(s), and design thermal and/or seismic movements into a maintenance free system built to last. Preassembly and shorter sized panels allow for quick lane-by-lane installation on retrofit applications.





## PHYSICAL PROPERTIES:

**Steel Edge Members** – All steel members and cover plates are manufactured from structural steel, and are designed by WBA Engineering staff to properly carry loads, limit deflection, and account for infinite fatigue life.

**QuietRide™ Technology** – Factory poured high density polyurethane pads are kept in constant contact to the adjacent structure by hardware that is installed to a specified torque. Specialty designed non-metallic compression springs maintain specified hardware tension throughout the expansion joint’s service life.

**Slip Resistant Coating** – High coefficient of friction slip resistant epoxy coating factory applied to ensure years of service under the most aggressive environments.

**Wabo®Crete Parking Series Elastomeric Concrete** – Refer to Wabo®Crete Parking Series data sheet for details on physical properties.

### Optional: Wabo®GutterFlex Drain Trough

PROPERTY	REQUIREMENTS
Fabric Type	4 ounce polyester cloth
Temperature Range	- 30° F + 200° F
Hardness Shore A	70 +/-5
Tensile, PSI	1000
Elongation, %	250
Tear, Die C, PPI	150

- Anchor steel angles onto the concrete substructure using Wabo®Crete Parking Series elastomeric concrete
- Align and connect structural steel cover plate to cast in angles by use of structural steel anchor nuts.
- Tighten anchor nuts to specified torque using a torque wrench. Re-torque all nuts after one (1) hour or installation of one (1) stage is complete.
- Fill bolt hole cavities with Wabo®Crete Parking Series Elastomeric Concrete.
- Fill edge voids with Silicone Sealant on anchored side of cover plate (material by others)

## INSTALLATION SUMMARY:

- Concrete - Concrete interface must be dry and clean (free of dirt, coatings, rust, greases, oil and other contaminants), sound and durable. Loose, contaminated, spalled, deteriorated and/or delaminated concrete must be removed to sound concrete and repaired prior to placement of the expansion control system. New concrete must be cured (minimum of 14 days recommended).
- Prepare blockout to proper dimensions and grade. The bottom of the blockout shall be parallel with the plane of the roadway (true and flat).
- Position base steel angles with exposed structural steel threaded studs starting at a curb line and work across joint location.

## ADDITIONAL REQUIREMENTS/EQUIPMENT:

- Blockout base must be parallel with plane of riding surface. Sandblast blockout surfaces prior to installation.
- Calibrated torque wrench to tighten anchors.
- Pry bar to move and position panels.



## FOR BEST RESULTS:

- Install when concrete substrate is clean, sound, dry, and cured (14 day minimum).
- Minimize splice points by installing the optional drain trough in longest possible continuous length.
- Do not allow any of the Wabo®Crete Parking Series Elastomeric Concrete components to freeze prior to installation. Store all components out of direct sunlight in a clean, dry location between 50°F (10°C) and 90°F (32°C).
- Shelf life of chemical components is 1 year. Shelf life of Wabo®Crete Parking Series is 18 months.
- Periodically inspect bolt hole filler and edge void sealant and repair localized areas as needed. Consult a Watson Bowman Acme representative for additional information.
- Make certain the most current version of the product data sheet is being used. Please consult the website ([www.watsonbowmanacme.com](http://www.watsonbowmanacme.com)) or contact a customer service representative at 1-800-677-4922.
- Proper application is the responsibility of the user. Field visits by Watson Bowman Acme personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

## RELATED DOCUMENTS:

- Material Safety Data Sheets
- Wabo®BusTuff Specifications
- Wabo®BusTuff Sales Drawings

## LIMITED WARRANTY:

Watson Bowman Acme Corp. warrants that this product conforms to its current applicable specifications. WATSON BOWMAN ACME CORP. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. The sole and exclusive remedy of Purchaser for any claim concerning this product, including, but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is the replacement of product or refund of the purchase price, at the sole option of Watson Bowman Acme Corp. Any claims concerning this product shall be submitted in writing within one year of the delivery date of this product to Purchaser and any claims not presented within that period are waived by Purchaser. IN NO EVENT SHALL WATSON BOWMAN ACME CORP. BE LIABLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDES LOSS OF PROFITS) OR PUNITIVE DAMAGES. Other warranties may be available when the product is installed by a factory trained installer. Contact your local Watson Bowman Acme representative for details. The data expressed herein is true and accurate to the best of our knowledge at the time published; it is, however, subject to change without notice.

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