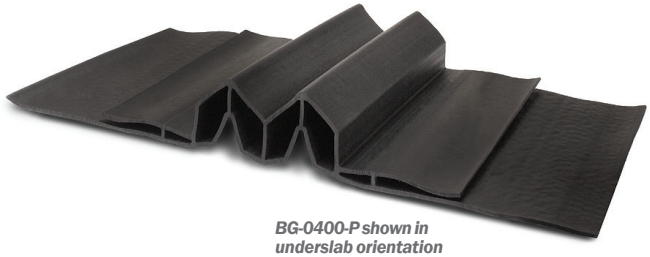
BG System

TECH DATA

For positive-side below-grade wall, blind-side formed foundation walls, and under slabs



BG-0400-P shown in underslab orientation

Features

- Watertight system for positive side, below-grade wall joints
- Watertight system for negative side wall & under-slab waterproofing
- High movement
- Redundant sealing
- Double-level membrane integration flanges
- Welds to PVC or PVC-backed membranes
- Adheres to rubber, mod-bit, or hot-rubberized membranes
- Redundant fastening—adhesion or welding & termination bar
- Heat welded transitions at tees, crosses, outside and inside-90's
- Watertight transition to EMSEAL wall joints
- Watertight transition to FP plaza deck joints

Uses and Applications

Structural expansion joints in foundation and tunnel walls and slabs both in positive and blind side construction.

Cast concrete walls where access to the positive side is possible (positive side conditions)

Cast concrete walls where access to the positive side is not possible after casting (lagging or single-side forming conditions)

Foundation and tunnel under-slab conditions (slab is cast onto waterproofing membrane and BG SYSTEM)

Where access to walls is possible and the joint runs through the floor slab, the BG SYSTEM would be used on the underside of the floor slab and would transition through a factory-welded outside-90 to BG SYSTEM installed into the wall joints.

At the top of foundation walls, the BG SYSTEM would transition to RoofJoint in softscapes (vegetative roofs, soil and turf, etc.), and to MIGUTAN FP in hardscapes (pavers, asphalt, concrete).

(NOTE: with the new BG SYSTEM design and its use on positive side walls, it is no longer necessary to install the MIGUTAN FP 110/25 metal retainer system on the walls. This significant improvement in practice represents a labor and material savings over our previously recommended procedure).

Product Description

The BG System is a heavy-duty, double-celled, extruded, thermoplastic rubber gland flanked by integral side flashing flanges.

The system consists of:
1) Thermoplastic (heat-weldable) BG sealing insert and dual level, side flashing flanges
2) Termination bar and special anchors

The above components are combined in the field with a waterproofing membrane and accessories offered by the waterproofing membrane manufacturer for use in integrating the BG SYSTEM to waterproofing membranes in positive-side wall and negative-side blind forming wall and under-slab conditions.

(Note: Termination bar and anchors are optional at the discretion of the membrane manufacturer when the BG SYSTEM is fully welded into a compatible PVC or PVC-backed membrane.)

Sizes and Movement Capabilities:

Model	Joint Gap in Field	Movement Capability*
BG-0200-P	1-2 inches (25-50 mm)	2 1/2 inches (60 mm)
BG-0400-P	3-4 inches (75-100 mm)	5 inches (125 mm)

BG SYSTEM is now also available in two sizes for joints up to 4-inches (100mm).

BG-0200 and BG-0400 represent a significant development in its BG SYSTEM product range. The BG SYSTEM is now available for use in positive side foundation wall waterproofing as well as for use in its traditional role in blind-side wall and under-slab applications.

This development comes as a result of a new extrusion featuring dual-level flanges which afford redundancy in anchoring and membrane integration. The extrusion is the same one used in EMSEAL's RoofJoint product. Consequently it can be welded continuously with RoofJoint across tunnel roofs and under soft-scaped plazas.

In hard-scaped plaza and split-slab conditions, the new BG SYSTEM glands can also be welded to the rubber sealing components (central insert and side flashing sheets) of our other FP (For Plaza) systems including MIGUTAN, SJS-FP, DSM-FP, and SJS-FP-FR to ensure continuity of seal.

Transition from below grade walls to above grade walls sealed with COLORSEAL or SEISMIC COLORSEAL is also practically achieved using the appropriate detail for this condition from EMSEAL.

** Note: Movement as a percent of joint size is affected by the joint-size into which the BG SYSTEM installed. In general it is safe to assume that the BG SYSTEM is capable of 100% movement of mean-temperature joint size. Consult EMSEAL for specific conditions.*

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Wall and Underslab Orienation

BG-0200-P shown in underslab orientation

BG-0200-P shown in positive side wall orientation.

BG-0400-P shown in underslab orientation

BG-0400-P shown in positive side wall orientation.

Positive Side Installation

Where the construction method is to form free-standing foundation walls leaving access for installation of the waterproofing membrane from the positive (outside) of the foundation wall, the waterproofing membrane is installed up to the joint opening in accordance with the membrane-manufacturer's instructions.

The BG SYSTEM is installed into the joint. The lower flange is welded or adhered to the outside face of the membrane. Termination bars and anchors are installed over the lower flange of the BG SYSTEM extrusion to mechanically fasten the BG extrusion to the wall.

The upper flange of the BG extrusion is welded or adhered to the waterproofing membrane to encapsulate the termination bar, anchors and lower flanges. Another layer of waterproofing membrane is installed and adhered or bonded over the upper flanges of the BG SYSTEM. A protection course and/or drainage board is installed over the entire waterproofing membrane and integrated BG SYSTEM as prescribed for the application by the waterproofing membrane manufacturer and/or designer. The walls and waterproofing system are then backfilled.

Blind Side Installation

Where the structural joint extends through the foundation slab, the waterproofing membrane is installed on the ground over the mud-slab, compacted fill or gravel as prescribed by the designer or waterproofing membrane manufacturer, as well as onto the lagged walls in accordance with the waterproofing membrane manufacturer's instructions.

BG SYSTEM fully integrated into waterproofing membrane and installed onto lagged wall.

The BG SYSTEM sealing gland is laid over the waterproofing membrane at the centerline location of the structural expansion joint opening to be formed and cast later.

The underside of the wider of the two BG SYSTEM integration flanges are welded or adhered to the installed waterproofing membrane using accessories and methods provided by the waterproofing membrane manufacturer as tested and approved for this purpose.

Another layer of the waterproofing membrane is welded or adhered over the top of the lower BG SYSTEM integration flange and carried out to a width which is wider by at least six inches than the BG SYSTEM integration flanges.

The upper (narrower) BG SYSTEM integration flange is welded or adhered to the membrane below.

Another full width layer of waterproofing membrane is firmly, and without any voids, welded or adhered to the waterproofing membrane thereby completing a sandwich of the BG SYSTEM side flashing flanges and the waterproofing membrane.

The BG SYSTEM termination bar and anchors are installed to hold the system in place prior to pouring concrete. *(NOTE: in welded systems the termination bar and anchors may not be required–consult waterproofing membrane manufacturer).*

A form is positioned over the belly of the BG SYSTEM extrusion and the concrete is poured over the waterproofing membrane and BG SYSTEM sandwich.

The net result is the integration of the below-grade waterproofing membrane and expansion joint system on the positive side (the side that water reaches first) of the wall or floor while ensuring that movement at the joint-gap is properly accommodated.

Termination at Footings *(No joint in slab)*

Where the structural joint is designed only in the walls and does not continue through the foundation slab, the BG SYSTEM is integrated into the waterproofing membrane on the·walls and must terminate at the concrete footings at a point designed to be below the elevation of the slab and into a properly designed, active, perimeter drainage system. Details of flashing skirts for footing termination are available from EMSEAL.

Warranty

Positive Side Installation:
EMSEAL offers a limited 5-year warranty for installations on the positive side of freestanding foundation walls.

Blind Side Formed Installations:
The BG System is a solution to the difficult problem of sealing expansion joints in blind-side formed foundation conditions created through the choice or need to cast concrete against lagging rather than casting freestanding foundation walls.

The specification of the BG SYSTEM is made as a consequence of the designer's recognition of the merits of the principle of the BG SYSTEM solution. Likewise specification of the BG SYSTEM is made with the designer's and owner's understanding of the need for proper installation and control and protection of the system throughout the construction process that includes the placement of rebar, setting of forms and casting of concrete over the already placed waterproofing membrane and BG SYSTEM.

Because the BG SYSTEM is heavily dependent on proper workmanship during installation, and protection after it is installed and before and during concrete placement, EMSEAL offers no warranties for watertightness in blind-side formed applications. EMSEAL assumes no responsibility and supplies no warranty for the workmanship of the contractors involved in any part of site preparation and/or installation of the BG SYSTEM in blind-side conditions, or for the finishing of any part of the related work on any project.

The BG SYSTEM will not perform in conditions that are unsuitable to the requirements for performance of the waterproofing membrane materials into which the BG SYSTEM is integrated (consult the waterproofing membrane manufacturer).

3rd Party Single Source Warranty Covering Both the Waterproofing Membrane and BG SYSTEM Expansion Joint:
Available through select waterproofing membrane manufacturers a watertight limited warranty covering installations under slab and on positive or blind side wall applications is available from the waterproofing membrane manufacturer when the joint is installed as a component with their specific waterproofing membrane and under their terms of site supervision and training. Consult EMSEAL.

Availability & Price

The BG System is available for domestic or international shipment. Prices are available directly from the manufacturer. The product range is continually being updated, and accordingly EMSEAL reserves the right to modify or withdraw any product without prior notice.

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