

# Steelflex® Strip Seal Expansion Joint Systems

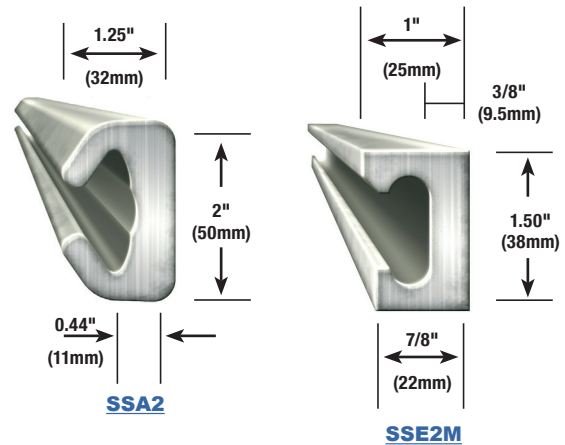
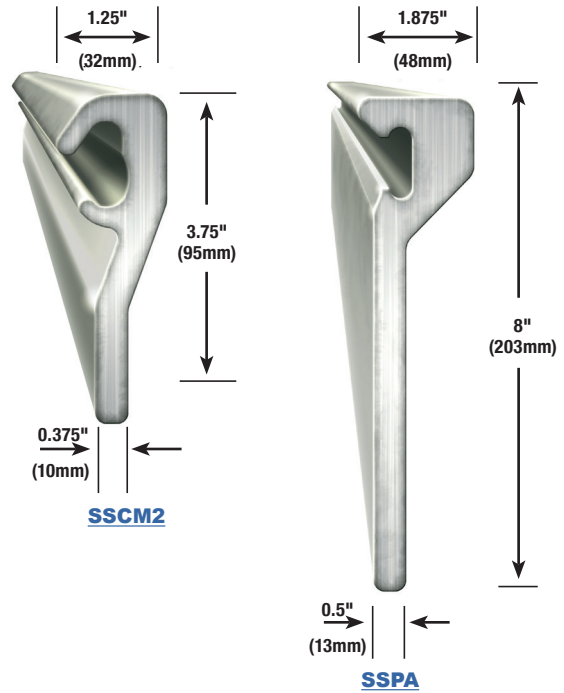
For decades, cast-in-place Steelflex® Strip Seal Expansion Joint Systems have provided superior watertight performance and longevity over bolt-down, segmental bonded and pourable expansion joint systems. Steelflex® Strip Seal Expansion Joint Systems have become the overwhelming choice of owners and specifying engineers around the world for accommodating up to 4 inches (102mm) of total structural movement in the direction of travel per AASHTO guidelines. A variety of glands are available for applications with wider movement ranges, debris reducing, seismic and other extreme events. Consult D.S. Brown for design considerations.

## System Components

Cast-in-place Steelflex® Strip Seal Expansion Joint Systems consist of two proprietary components: steel rail profiles and a matching polychloroprene sealing element.

## Steel Rail Profile

Steelflex® rail profiles are one-piece construction, manufactured using innovative hot rolled/non-machined and hot rolled/machined technology. SSA2, SSCM2, and SSPA steel rails are available in ASTM A36 or ASTM A588 steel grades. SSE2M rail profile is only available in ASTM A36 grade.



Steelflex® SSPA Strip Seal Expansion Joint System

Recent design improvements have eliminated all horizontal “legs” on the steel rail profiles to facilitate proper concrete placement during installation. Independent field and laboratory testing has demonstrated that improperly consolidated concrete around the steel rail, anchorage, and/or reinforcement could lead to performance issues. Anchorage of the steel rail profile into the deck concrete is the primary load carrying mechanism and, therefore, is critical to ensure long-term performance. Research has confirmed that properly sized and spaced shot-on studs provide an economical, field-proven anchorage method.

Because it is field-proven, the Steelflex® SSCM2 rail profile has become widely accepted worldwide as an economical standard in the industry. Other steel profiles ([SSCM](#) and [SSA](#)) are also available to satisfy your specific project need.

Bridges

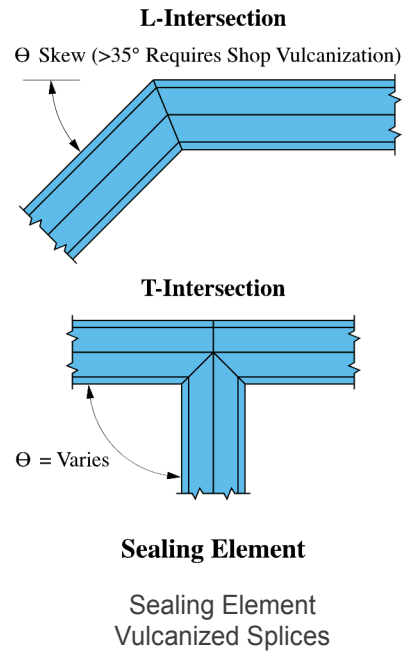
Bridge the World with Leading Infrastructure Solutions



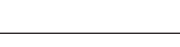




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## Polychloroprene Sealing Elements

Selection of a polychloroprene strip seal sealing element is based on the maximum movement either perpendicular ( $MR_L$ ) or parallel ( $MR_T$ ) to the Steelflex® Strip Seal Joint Assembly. To assist in your selection, the following table provides movement ranges for each sealing element type and the corresponding proprietary steel rail profile. Information is also provided on the range of joint opening dimensions. The preferred joint opening dimensions for sealing element installation is approximately 2.0 inches (51mm). However, the preferred joint opening dimension for A2R-O and L2R-O seals is approximately 3.0 inches (76mm). Polychloroprene strip seal sealing elements are installed in a continuous piece, without vulcanization, up to a 35 degree angle. All D.S. Brown polychloroprene sealing elements are in-house designed and tested to provide a watertight seal at the connection to the Steelflex® rail profile. Factory molded polychloroprene sealing element splices can also be produced to accommodate your specific project needs.



Sealing Element Cross-Section	Sealing Element	$MR_L$	Movement Range $MR_T$	Joint Opening	Corresponding Steelflex Rail
 A2R	<a href="#">A2R-400</a>	4.0 (102)	$\pm 2.0$ (51)	0.5 - 4.5 (13) (114)	
 A2R-XTRA	<a href="#">A2R-XTRA</a>	5.0 (127)	$\pm 2.0$ (51)	0.5 - 7.5 (13) (191)	<a href="#">SSCM2</a> <a href="#">SSA2</a>
 A2R-O	<a href="#">A2R-0</a>	4.0 (102)	$\pm 0.5$ (13)	1.0 - 5.0 (25) (127)	
 E2M-Seal	<a href="#">E2M-Seal</a>	4.0 (102)	$\pm 2.0$ (51)	0.5 - 4.5 (13) (114)	<a href="#">SSE2M</a>
 L2	<a href="#">L2-400</a>	4.0 (102)	$\pm 2.0$ (51)	0 - 4.0 (0) (102)	
 L2-500	<a href="#">L2-500</a>	5.0 (127)	$\pm 2.0$ (51)	0 - 5.0 (0) (127)	<a href="#">SSA</a> <a href="#">SSPA</a> <a href="#">SSCM</a>
 L2-O	<a href="#">L2-0</a>	4.0 (102)	$\pm 0.5$ (13)	1.0 - 5.0 (25) (127)	

Bold numbers represent inches; metric (mm) in parentheses.  
 Cold weather natural strip seal glands are available upon request.  
 D.S. Brown manufactures strip seal glands capable of opening up to 7";  
 for safety reasons, AASHTO stipulates 4" as the maximum gap in the  
 direction of travel.