

# WINGED JOINT SYSTEMS

## WM-Series



### Description

The WM-Series System is an expansion joint product designed for parking garages and open-air structures, as well as buried joint applications, where leak stoppage is critical.

The design features an extruded elastomeric membrane, which is fusion-bonded to the concrete deck with Polycrete Elastomeric Concrete. Once installed, the system provides a watertight seal, while flexing in response to fluctuations in joint width.

There are four distinct sizes in the WM-Series family group, namely, the WM-150, WM-200, WM-225 and WM-101. Each is designed for a different joint opening and movement capability.

The WM-Series shapes are an appropriate selection for use where thin topping slabs require a proportionately shallow expansion joint profile. The single-ply membrane installs more easily than other multi-celled shapes that must be compressed and forced down into the joint opening.

A further use for the product is for buried applications where it is extremely important to specify and install a watertight system.

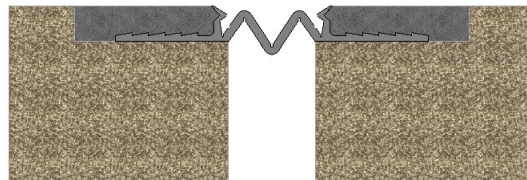
### Physical Properties

The system consists of two items: an extruded elastomeric membrane and Polycrete Elastomeric Concrete. The membrane is available in several sizes. It is an extruded shape made from an EPDM-based, thermo-rubber material (Santoprene®). The material meets requirements of ASTM D2000 and has properties as shown in Table 1.

The Polycrete consists of a combination of a resin mixture and a gradation of sands and aggregate sizes, blended per recommendations of the manufacturer. (See the Polycrete data sheet for further information and technical properties.)

**TABLE 1 – Physical Properties of the EPDM-Based Thermo-Rubber Seal Element**

Property	ASTM Test Method	Requirement
Tensile strength, min.	D412	1000 psi
Elongation at break, min.	D412	410%
Hardness, Type A durometer	D2240 (modified)	67
Compression set	D395 (Method B)	
168h @ 77°F		24%
168h @ 212°F		36%
Tear strength	D624	140 lb/in
Tension set	D412	10%
100% modulus	D412	420 psi
Specific gravity	D792	0.97
Brittle point	D746	< -81°F



PRODUCT	MIN. WIDTH IN (MM)	MID-RANGE IN (MM)	MAX. WIDTH IN (MM)	TOTAL MOVEMENT IN (MM)
<b>WM-150</b>	0.63" (16.0)	1.50" (38.1)	2.13" (54.1)	1.50" (38.1)
<b>WM-200</b>	1.00" (25.4)	2.00" (50.8)	2.75" (69.9)	1.75" (44.4)
<b>WM-225</b>	1.06" (26.9)	2.25" (57.2)	3.50" (88.9)	2.44" (62.0)
<b>WM-101</b>	1.25" (31.8)	3.25" (82.6)	7.75" (196.9)	6.50" (165.1)