

Installation Instructions

Joint System: CR/WM Series

A. Polycrete Recommended Equipment

1. The following installation equipment is required:
 - a. Heavy duty jiffy mixer for mixing liquids and prebatched aggregate.
 - b. A minimum 4,000 watt generator for running the mixer.
 - c. Two propane tanks, at 40 lbs. each, with rosebud or weedburner ends. These are used for heating the aggregate in the mixer. When temperature is under 40°F, heat aggregate with a propane torch to 130°F to 150°F.
 - d. Miscellaneous hand tools such as drills and trowels, and necessary extension cords.

B. Estimated Manpower Requirements

2. Efficient CR & WM Polycrete expansion joint system installation requires a minimum of three individuals:
 - a. One operating the special mixer, heating the aggregate and preparing the blend of aggregate and resins.
 - b. One bringing prebagged aggregate to the mixer, delivering the final mix to the blockout area and placing the mix in the blockout.
 - c. One packing and troweling the final mix after placement in a blockout.

NOTE: These are manpower minimums and should be increased if greater installation capacity is desired. Typical daily output will be approximately 200-250LF per 8 hours day, per 3 person crew.

C. Preparation of the Work Area

3. To ensure proper Polycrete bond, clean the blockout of all contaminants and impurities, such as water repellents, laitance, surface dirt/rust, and old sealants, by sandblasting or wire brushing before applying Polycrete.
4. Level blockout flat with latex Modified Mortar or equal to provide a dead level bearing area for the seals. After leveling, make blockout depth a minimum of 3/4" (20mm) and a minimum width of 2 1/2".
5. Adjacent joint area may be masked with tape to ensure neat, clean joint lines.
6. Blockout area must be completely dry before applying Polycrete.

Figure 1

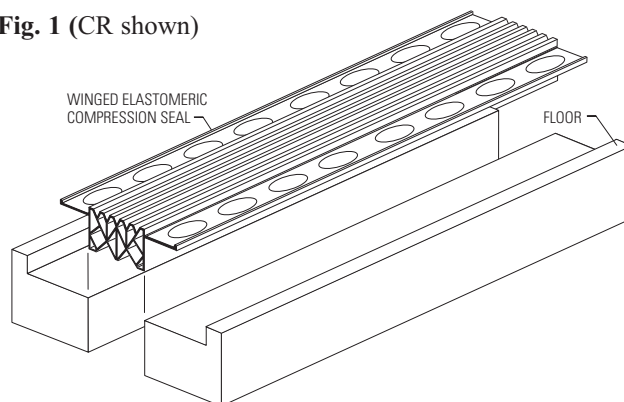
D. Placement of Membrane Seal

7. Center the membrane seal over the open joint and install with the anchoring flaps seated squarely on the blockout base. Refer to chart for membrane seal selection.
 - Compression seals are designed to be in a minimum of 15% compression at all times. Therefore, it is not advisable to choose a seal that is the same width as the expansion joint opening in its nominal state.
 - The selection charts list the minimum and maximum widths of the joint opening in its nominal state. The nominal or design width of the joint opening (before compression or expansion occurs) should fall as close as possible to the midpoint of this range.

Selection Chart:

Application	System	Nominal Seal Width US	Nominal Seal Width mm	Minimum Joint Width US	Minimum Joint Width mm	Maximum Joint Width US	Maximum Joint Width mm	B Blockout US	B Blockout mm	H1 Depth US	H1 Depth mm
Parking Deck	CR-225	2 1/4"	57	3/4"	19	1 1/4"	44	3"	76	3/4"	19
	CR-250	2 1/2"	64	1"	25	2 1/4"	57	3"	76	3/4"	19
	CR-300	3"	76	1 1/2"	38	2 3/4"	76	3"	76	3/4"	19
	CR-400	4"	102	1 5/8"	41	3 3/4"	95	3"	76	3/4"	19
	CR-500	5"	127	2"	51	4 3/4"	121	3"	76	3/4"	19
	CR-600	6"	152	2 3/4"	70	5 1/4"	146	3"	76	3/4"	19
Parking Deck / Buried Joints	WM-125	1 1/4"	32	3/4"	19	2 1/4"	70	2 1/2"	64	3/4"	19
	WM-150	1 1/2"	38	1 1/8"	19	3"	76	2 1/2"	64	3/4"	19
	WM-200	1 3/4"	44	1 3/8"	44	5 1/4"	146	2 1/2"	64	3/4"	19

Fig. 1 (CR shown)



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E. Installation of Polycrete Bedding Adhesive

8. Mix Part A, the white epoxy adhesive, & Part B, the black epoxy adhesive, together until a homogenous mix is reached. Mixing the adhesive is best accomplished with a 1/2" to 3/4" drill counter clockwise with a paint style mixing blade or paddle. Mix for approximately 3 minutes until a solid grey paste is achieved.

* 1 unit of tack coat will install 35 LF.

Pot Life: 200 gram sample
 30 min. at 15° C
 25 min. at 20° C
 20 min. at 25° C
 15 min. at 30° C

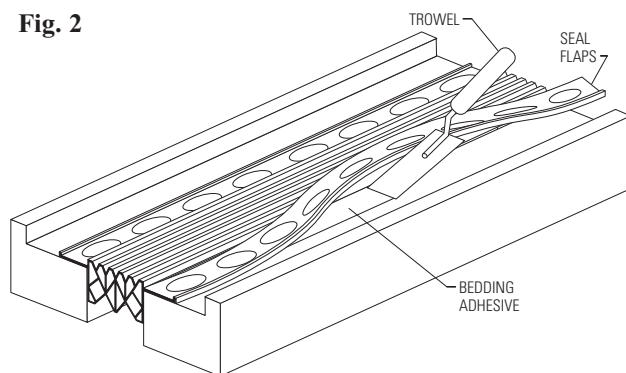
Cure Time (subject to humidity and UV levels):

	10° C	20° C	30° C
Gel:	8 hrs.	4 hrs.	2 hrs.
Hard:	16 hrs.	8 hrs.	4 hrs.
Full Cure:	7 days	3 days	1 day

Figure 2

9. Raise seal flaps and spread Bedding Adhesive Mixture evenly over blockout bottom. Insure seal flaps are firmly pressed into the Polycrete Bedding Adhesive. Embed seal flaps while Bedding Adhesive is still tack or plastic. DO NOT allow Bedding Adhesive to cure.

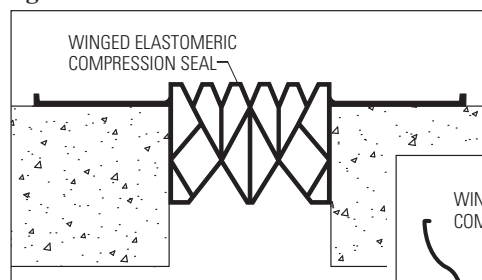
Fig. 2



Figures 3 & 4

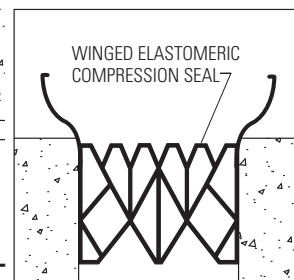
NOTE: Weights may be applied to the seal to insure seal flaps remain flat. Seal flaps should not protrude into the joint. Flaps must rest on the blockout.

Fig. 3



CORRECT

Fig. 4



INCORRECT

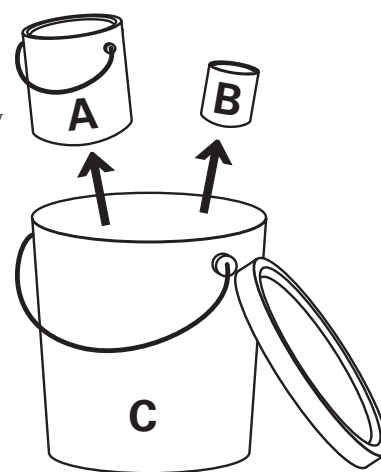
F. Mixing of Polycrete Elastomeric Concrete

Figure 5

The elastomeric blockout material is composed of:

- Part A - a 4 liter elastomeric epoxy
- Part B - 250ml elastomeric fast cure
- Part C - 2.5 gallons of mixed aggregate.

Fig. 5



PARTS A & B ARE SHIPPED INSIDE CONTAINER C

10. Remove all contents from large pail and transfer Part C aggregate into separate pail.

1 unit of elastomeric header will install 12 LF.
 Blockout dimensions: 3/4" x 2 1/2"

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11. Blend Parts A and B together in large bucket C. Mixing drill shall be a 3/4" counter clockwise with a paint style mixing blade or similar (Use a jiffy mixer if large quantities are utilized). This liquid blending process should take no longer than 4 minutes with drill (1 to 1.5 minutes with a jiffy mixer). Store the resins at room temperature.
12. Slowly blend the Part C aggregate into the liquid. Keep the mixing blade on the bottom of the pail for a minimum of 30 to 45 seconds to start the mix.

G. Placement of Polycrete Elastomeric Concrete

13. For protection, mask seal. NOTE: Duct tape may be used for masking as polycrete elastomeric material will not adhere to duct tape.

Figure 6

14. Pour or scrape the mixed Polycrete Elastomeric Concrete into the blockout area and trowel in place with a bullnose or bricklayer trowel. NOTE: Dipping tools in toluene or xylene helps minimize adhesion of epoxy to tools.

As the air temperature decreases below 50°F, workability becomes more difficult. Install materials at 5°C (40°F) and rising.

H. Curing of Polycrete Elastomeric Concrete

15. Cure Schedule:
 - 3 hours at 135°F-55°C
 - 6 hours at 120°F-45°C
 - 12 hours at 100°F-40°C
 - 18 hours at 86°F-30°C
 - 24 hours at 70°F-20°C

Fig. 6

