

Installation procedure

SERIES 1100 GOODFLEX EXPANSION JOINTS WITH BLEEDER HOLES

1. Expansion joint assemblies are supplied preassembled with a “J” gap width, as shown on the shop drawings, which corresponds to a temperature of 15 °C.
2. It is important that the “J” gap width of the joint assembly be adjusted according to the ambient temperature. In the case of a concrete bridge structure, ambient temperature is determined based on the mean shade air temperature over the previous 48 hours; for steel bridge structures, ambient temperature is based on the mean shade air temperature over the previous 24 hours.
3. Clean the area where the joint assembly will be installed using compressed air to remove any accumulated debris.
4. Lower the joint assembly into position and bend back any rebars that may be in the way. In the case of a new bridge, we recommend that rebars be positioned in order to avoid any interferences.
5. Position the joint assembly to ensure that the vertical portion of the sidewalk or parapet is recessed by approximately 15 mm in order to protect the joint assembly from snowplow blades.
6. Adjust the elevation of the joint assembly so that it is flush with the roadway surface. The joint assembly must be installed at the same level as the wearing surface.
7. If the joint assembly has been supplied in several sections, make sure that the sections are well aligned both vertically and horizontally by bolting them together with the designated fasteners. Perform a seal weld on the bolted connection as shown in the connection detail on page 11 of our brochure or on the shop drawings. These welds must be made on the armouring angles of the joint assembly and on the nosing angles. The surface on which the strip seal will rest must be ground smooth. This procedure must be followed to the letter as leaks occur most frequently at joint splices.
8. Secure the joint assembly in place by welding it to the rebars that protrude into the blockout. The joint assembly must be secured on both sides every 600 mm centre-to-centre (c/c). In the case of a bridge rehabilitation project, if the existing rebars are not in good condition, holes with a minimum depth of 150 mm must be drilled in the concrete every 600 mm centre-to-centre (c/c) in order to insert 20M dowels. The dowels must be secured in place using high-strength grout or an injectable chemical anchor such as Hilti HY150 or an equivalent product.
9. Install the additional rebars as shown on the contract drawings, when required.
10. Install the formwork in the blockout that will create the joint opening.
11. Cover the top of the joint assembly using 6 mm plywood panels placed side by side to prevent concrete from failing the joint gap.

12. Fill the blockout with the specified concrete. The concrete vibration must be performed carefully to eliminate all voids at the numerous steel/concrete interfaces as well as underneath angles and around the anchors.
13. Screed the concrete with a rough finish between the armouring angle and the nosing angle, at the level of the top of the steel.
14. Cut the central section of the temporary assembly angles using a torch within two to four hours of pouring the concrete in order to allow the joint assembly to move freely. Take care not to damage the joint assembly. Never cut the angles before the initial set of the concrete.
15. The temporary assembly angles can only be completely removed once the concrete has cured for a period of at least 48 hours.
16. All the bleeder holes on the angles must then be cleaned, injected and sealed using an epoxy grout according to the designer's requirements.