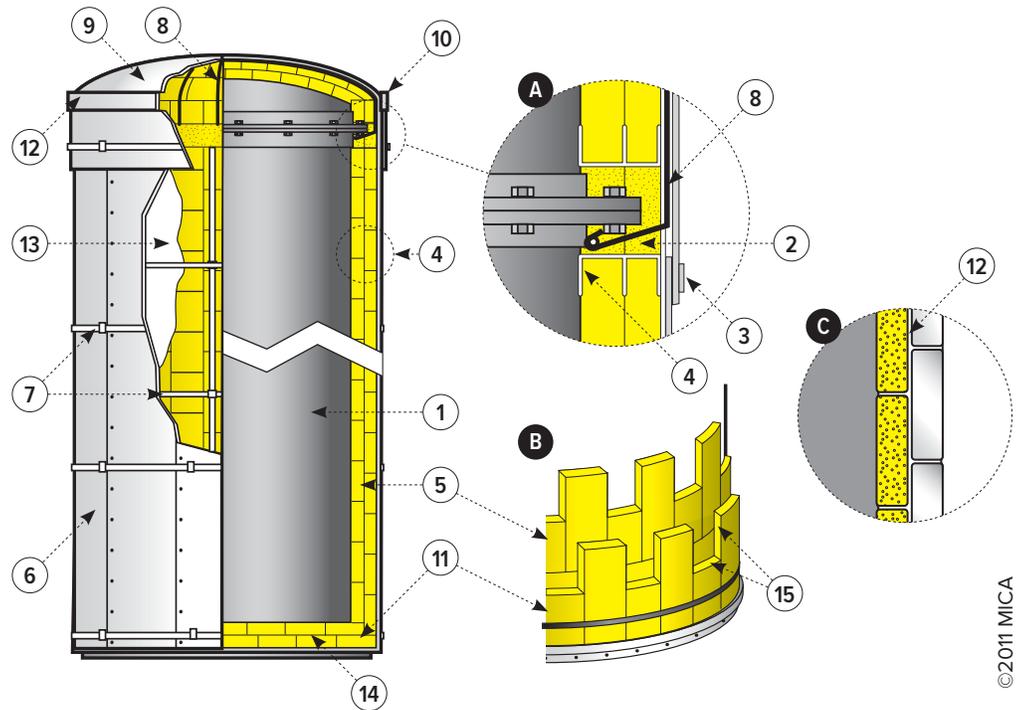


Low Temperature Vessels Block Insulation

Low temperature below 0°C (32°F) installations such as refrigerant storage tanks, and process equipment may require multiple layer block construction, securement of the insulation with bands and the design of contraction joints. Contraction joint is filled with blanket insulation to absorb linear contraction of vessel when at operating temperatures. (Material is compressed tightly into joint.)



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Detail **A** — **Contraction joint** (typical).

Detail **B** — **Double layer staggered joint** construction.

Detail **C** — **Joint sealant** application.

Materials: Rigid block insulation, fiber blanket insulation, jacketing, bands, stranded cable, and vapor retarder mastic.

1. Vessel surface.
2. Contraction joint insulation.
3. Contraction joint. (See *Detail A*, also *Plate 4-620, Detail B-7*).
4. Vapor stop (dam) (See *Plate 4-660*)
 - Must seal outside of the insulation equal to the insulation thickness.
 - Seal annular space .
5. Insulation.
6. Jacketing.
7. Bands. (Provide for contraction).
8. Head insulation shown secured with a floating ring of cable fastened to another ring of cable under head flange. (See *Detail A*, also *Plate 4-620, Detail A & B*).
9. Tank head jacket or finish. (See *Plate 4-620, Detail B*).
10. Vapor retarder mastic (if required).
11. Bottom insulation. (High compressive strength, water, vapor resistance, and low coefficient of friction required).
12. Vapor retarder sealant (if required).
13. Vapor retarder jacket.
14. Damp-proof course in between layers.
15. Bottom course bedding sealant to prevent flood water ingress. (Bedding sealant must serve as a vapor retarder.) See *Plate 4-660*.