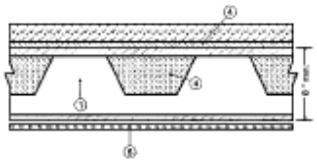
FIRE RESISTANCE INFORMATION

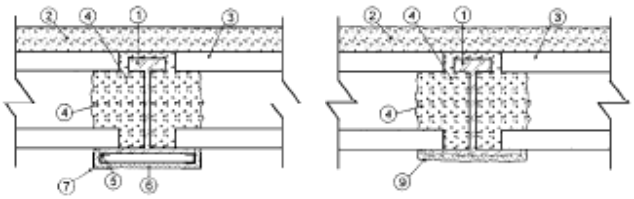
ASSEMBLY RATINGS

Design No. K912 (February 24, 2025)

Restrained Assembly Ratings – 2 or 3 Hr (See Item 2)
Unrestrained Assembly Ratings – 2 Hr
Unrestrained Beam Ratings – 2 Hr

Fire Resistance Ratings
BXUV – ANSI/UL 263 Certified for United States
BXUV7 – CAN/ULC-S101 Certified for Canada





1. **Steel Beam** – Composite dissymmetric steel beam fabricated from structural steel members in accordance with the Specification for the Design, Fabrication and Erection of Structural Steel for Buildings, published by the American Institute of Steel Construction. The castellated steel beam, with a partially open web consists of the bottom flange and partial web with a bar welded to the web that serves as the top flange and conforms to the following requirements on pages 12, 14 and 15 of this Design Guide.

2. Concrete Topping – (Optional for unrestrained rating) – 3000 psi compressive strength, 150 (± 3) pcf unit weight. Normal weight concrete. Min 1-1/8 in. thickness required for 3 hr Restrained Assembly Rating.

3. Precast Concrete Units* – Carbonate, siliceous or lightweight aggregate. Min 8 in. thick by 4 or 8 ft wide units with cross section similar to that shown for Design No. J952. Openings may be provided through the units for piping, ducts or similar services and should be suitably enclosed with constructions having at least equal resistance, acceptable to authorities having jurisdiction. Units have a min 1-1/2 in. bearing on the bottom flange of Item 1.

4. Grout – Sand-cement grout (3500 psi min compressive strength). Min avg thickness of 9/16 in. above top bar. Hollow cores in precast concrete units grouted 6 in. min from beam web.

5. Runner Channel – Fabricated from 25 MSG galv steel, min 1/2 in. deep, with 1 in. legs, fastened to steel beam with XZF powder actuated pins spaced 12 in. OC.

6. Gypsum Board* – 1/2 or 5/8 in. thick gypsum board fastened to runner channels with 1 in. long, 0.150 in. diam steel screws spaced 16 in. OC.

7. Corner Bead – Fabricated from min 28 MSG galv steel to form an angle with 1-1/4 in. legs. Legs perforated with 1/4 in. diam holes approximately 1 in. OC. Attached to runner channel through gypsum board with 1 in. long, 0.150 in. diam steel screws spaced 16 in. OC.

8. Joint Compound – (Not shown) 1/32 in. thick on bottom and sides of wallboard from corner beads and feathered out. Paper tape embedded in joint compound over joints with edges of compound feathered out.

9. As an alternate to Items 5 through 8, the bottom flange of the steel beam
may be protected with a spray applied fire resistive material. Applied in one coat to a final untamped thickness of 3/8 in. to steel surfaces which are free of dirt, oil or scale. Min avg untamped density of 13 pcf with min ind untamped density of 11 pcf for Types II and D-C/F. Min avg and min ind untamped densities of 22 and 19 pcf, respectively, for Type HP. For Type I, min avg density of 15 pcf with min ind value of 12 pcf.

ISOLATEK INTERNATIONAL – Type D-C/F, HP, I or II, Type EBS or Type X Adhesive/Sealer optional*

a.. Spray-Applied Fire Resistive Material* – As an alternate to Items 5 through 9, the bottom flange of the steel beam and the flange tips may be protected with a spray applied fire resistive material. Applied in one coat to a final untamped thickness of 1/2 in. to steel surfaces which are free of dirt, oil or scale. Min avg and min ind density of 15/14 pcf respectively. For method of density determination, see Design Information Section.

GCP APPLIED TECHNOLOGIES INC – Types MK6/HY, MK-6ES, MK-6s, MK-10HB, MK-1000HB, RG, Z-106, Z-106G, Z-106HY, Z-146, Z-146 PC, Z-146T, Z-156, Z-156 PC, and Z-156T.

b.. Spray-Applied Fire Resistive Material* – As an alternate to items 5 through 9A, the bottom flange of the steel beam and the flange tips may be protected with a spray applied fire resistive material. Applied in one coat to an untamped thickness of 1/2 in. to steel surfaces which are free of dirt, oil or scale. Min. avg and min ind density of 15/14 pcf respectively for types 5GP and 5MD. Min. avg and min ind density of 19/18 pcf respectively for types 7GP and 7HD.

SOUTHWEST FIREPROOFING PRODUCTS CO – Types 5GP, 5MD, 7GP and 7HD

** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.*

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