

## BXUV.V430 - Fire-resistance Ratings - ANSI/UL 263



## Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

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BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

[See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States Design Criteria and Allowable Variances](#)

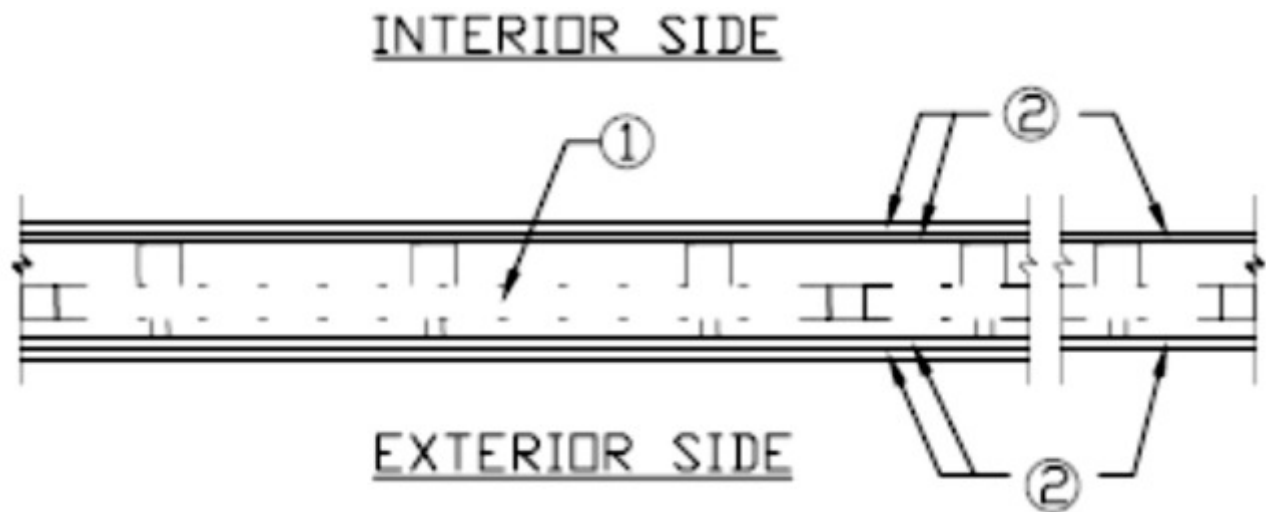
[See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada Design Criteria and Allowable Variances](#)

**Design No. V430**

March 13, 2020

**Bearing Wall Ratings — 1, 2, 3 or 4 Hr (See Item 2)**

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



**1. Structural Steel Members\*** — Horizontal structural tube steel frame with factory-attached furring channels, designated "Type A", min. 0.061 in. thick steel ASTM Grade A-500 A with amended yield strength 45 ksi and tensile strength 48 ksi, min. 2 in. by 2 in., galvanized or corrosion protected per manufacturers specifications. Maximum distance between vertical structural tube members is 7 ft 8 in. clear and maximum distance between horizontal structural tube members is 3 ft 10 in. clear. Vertical U-shaped corrosion protected furring channels min 20 ga, 7/8 in. depth, 1-5/8 in. min width for one side. The added depth of the furring channels on both sides is 3-1/2 in. Min. 22 ga. and min 2 in. width for furring channels on opposite side. Both sides welded at intersection with horizontal structural tube members and spaced 16 in. OC. Alternately, both sides screw-attached with a single min #8 3/4 in. Hex head self-drilling screw through the channel flange with optional vinyl grommet over optional foam isolator tape at intersection with horizontal structural tube members and spaced 16 in. OC. As an alternate to the screw, a powder-actuated fastener with a knurled shank, 5/8 in. long Hilti Type X-U 16, may be used to attach the channels to the tube members. Floor runner channel (optional) min. MSG 20 ga steel, 5-1/2 in. wide, 1 in. legs, galvanized steel tack welded at 16 in. OC to steel studs. As an alternate to attaching the furring channels to the top member of the structural tube steel frame, a min. 20 ga. (0.033 in. thick) Z-shaped or J-shaped horizontal channel is welded to the structural vertical members, spanning the full width of the panel. The maximum clear span between the Z or J channel and the horizontal structural member under it is 3 ft 10 in. The face of the furring channel ends is attached to the Z or J channel with the same welding attachment methods described above. Depth of Z or J channel is the same as the depth of the furring channels. Z channel has two 1-1/2 in. long legs and J channel has one 1-1/2 in long leg and one 2 in. long leg. The 2 in. long leg of the J channel is attached to the structural steel member. The panel members load bearing capacity shall be based on the AISC Specification for the Design of Cold-Formed Steel Structural Members.

#### **INNOVATIVE GREEN BUILDING SYSTEMS L L C**

**1A. Structural Steel Members\*** — (As an alternate to Item 1, not shown) — Structural Steel Members and Furring Channels as described below:

a. **Structural Steel Members\*** — Horizontal structural tube steel frame designated "Type A-NF", min. 0.061 in. thick steel ASTM Grade A-500 A with amended yield strength 45 ksi and tensile strength 48 ksi, min. 2 in. by 2 in., galvanized or corrosion protected per manufacturers specifications. Maximum distance between vertical structural tube member is 7 ft 8 in. clear and maximum distance between horizontal structural tube members is 3 ft 10 in. clear.

#### **INNOVATIVE GREEN BUILDING SYSTEMS L L C**

b. **Furring Channels** — Field attached, vertical U-shaped corrosion protected furring channels min 20 ga. (0.033 in. thick), 7/8 in. depth, 1-5/8 in. min width for one side. The depth of the furring channels for the opposite side shall be such that the added depth of the furring channels on both sides is 3-1/2 in. Min. 22 ga. (0.027 in. thick) and min 2 in. width for furring channels on opposite side. Both sides tack welded with two tack welds at each intersection with horizontal structural tube members and spaced 16 in. OC. Alternately, both sides screw-attached with a single min #8 3/4 in. Hex head self-drilling screw through the channel flange with optional vinyl grommet over optional 2 in. wide by 4 in. long piece of foam isolator tape (Item 1Ac) at intersection with horizontal structural tube members and spaced 16 in. OC. As an alternate to the screw, a powder-actuated fastener with a knurled shank, 5/8 in. long Hilti Type X-U 16, may be used to attach the channels to the tube members. Floor runner channel (optional) min. MSG 20 ga steel, 5-1/2 in. wide, 1 in. legs, galvanized steel tack welded at 16 in. OC to steel studs.

c. **Plastics- Component** — (Optional) — Foam isolator tape, maximum 1/4 in. thick polyvinyl chloride foam tape with pressure-sensitive adhesive on one side, bearing the UL Recognized Component Marking and having a UL94 flammability classification of HBF, HF-2 or HF-1. See UL Plastics Recognized Component Directory.

d. **Channel** — (Optional) — As an alternate to attaching the furring channels to the top member of the structural tube steel frame, a min. 20 ga. (0.033 in. thick) Z-shaped or J-shaped horizontal channel may be welded to the structural vertical members, spanning the full width of the panel. The maximum clear span between the Z or J channel and the horizontal structural member under it shall be 3 ft 10 in. The face of the furring channel ends is attached to the Z or J channel with the same welding attachment methods described in Item 1Ab (Furring Channels). Depth of Z or J channel shall be the same as the depth of the furring channels. Z channel shall have two 1-1/2 in. long legs and J channel shall have one 1-1/2 in long leg and one 2 in. long leg. The 2 in. long leg of the J channel shall be attached to the structural steel member.

e. **Vinyl Grommet** — (Optional) — 3/16 in. ID by 3/8 in. OD vinyl grommets. A vinyl grommet is optionally applied to the furring channel at the points of attachment.

**2. Gypsum Board\*** — **Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or U305.** The number of layers for the various ratings are: **4 Hr Rating** — Three layers of 5/8 in. thick gypsum board applied horizontally or vertically. Inner layer attached to furring channels with 1 in. long Type S screws spaced 24 in. O.C. 2nd layer attached to furring channels with 1-5/8 in. long Type S screws spaced 12 in. O.C. Outermost layer of gypsum board attached to furring channels with 2-1/4 in. long Type S screws spaced 12 in. O.C. Vertical and horizontal joints are staggered between layers. **2 and 3 Hr Rating** — Two layers of 5/8 in. thick gypsum wallboard or panels applied horizontally or vertically. Inner layer attached to furring channels with 1 in. long Type S screws spaced 24 in. O.C. Outer layer of wallboard attached to furring channels with 1-5/8 in. long Type S screws spaced 12 in. O.C. Vertical and horizontal joints are staggered between layers. **1 Hr Rating** — One layer of 5/8 in. thick gypsum wallboard or panels applied horizontally or vertically. Gypsum panels attached to furring channels with 1 in. long Type S screws spaced 12 in. O.C.

**AMERICAN GYPSUM CO** ([View Classification](#)) — CKNX.R14196

**BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO** ([View Classification](#)) — CKNX.R19374

**CABOT MANUFACTURING ULC** ([View Classification](#)) — CKNX.R25370

**CERTAINTED GYPSUM INC** ([View Classification](#)) — CKNX.R3660

**CGC INC** ([View Classification](#)) — CKNX.R19751

**GEORGIA-PACIFIC GYPSUM L L C** ([View Classification](#)) — CKNX.R2717

**CERTAINTED GYPSUM INC** ([View Classification](#)) — CKNX.R18482

**LOADMASTER SYSTEMS INC** ([View Classification](#)) — CKNX.R11809

**NATIONAL GYPSUM CO** ([View Classification](#)) — CKNX.R3501

**PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM** ([View Classification](#)) — CKNX.R7094

**PANEL REY S A** ([View Classification](#)) — CKNX.R21796

**SIAM GYPSUM INDUSTRY (SARABURI) CO LTD** ([View Classification](#)) — CKNX.R19262

**GEORGIA-PACIFIC GYPSUM L L C** ([View Classification](#)) — CKNX.R6937

**THAI GYPSUM PRODUCTS PCL** ([View Classification](#)) — CKNX.R27517

**UNITED STATES GYPSUM CO** ([View Classification](#)) — CKNX.R1319

**USG MEXICO S A DE C V** ([View Classification](#)) — CKNX.R16089

**2A. Gypsum Board\*** — (As an alternate to Item 2) — Installed (vertical only) as described in Item 2.

**NATIONAL GYPSUM CO** — Type SBWB

**2B. Gypsum Board\*** — (For the 1 and 2 Hr Ratings only, Not for 3 and 4 Hr Ratings, As an alternate to Items 2 and 2A) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically only and secured as described in Item 2.

**PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM** — Type QuietRock ES

**2C. Wall and Partition Facings and Accessories\*** — (For the 1 and 2 Hr Ratings only, Not for 3 and 4 Hr Ratings, As an alternate to Items 2 through 2C) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically only and secured as described in Item 2.

**PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM** — Type QuietRock 527

**3. Joint Tape and Compound** — (Not Shown) — Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of the outer layers only. Paper tape embedded in first layer of compound over all joints.

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