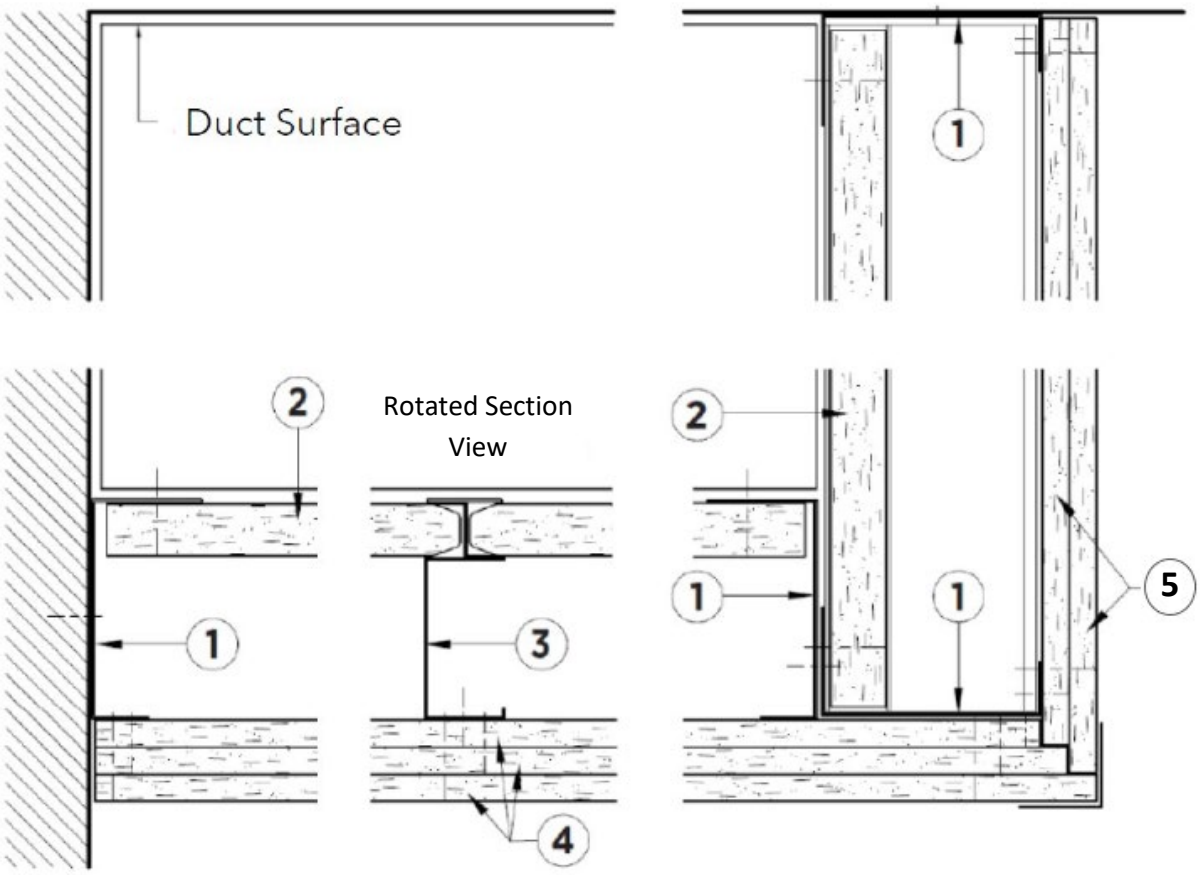
USG Corporation
Design No. USG/GPSWA 120-02
Duct Enclosure
USG/CGC Shaftwall System
CAN/ULC-S101, ASTM E119
Rating: 2-Hour Unrestrained, Non-Loadbearing



1. **J-RUNNER:** CGC/USG J-runners

   Min. 64 mm (2-1/2 in.) deep 24 GA CGC/USG J-runners attached to the perimeter or boundary wall with appropriate fasteners spaced max. 24 in. on center (oc). Connection of the vertical C-H stud to the top J-runner, and connection of the top J-runner to the structure, shall be capable of carrying the weight of the duct enclosure and verified by a registered design professional.

2. **GYPSUM LINER PANEL:** CGC/USG Sheetrock® Brand Liner Panels (UL Type SLX)

   Friction-fitted in the H-section of C-H studs and screw attached to the 51 mm (2 in.) leg of the J-runner with 41 mm (1-5/8 in.) Type S screws, spaced 305 mm (12 in.) oc or with an approved alternative securement method.

3. C-H STUDS: CGC/USG C-H Stud

Install the C-H studs perpendicular to the J-runners, spaced 610 mm (24 in.) oc, with two #8 - 12.7 mm (1/2 in.) long Type S-12 screws, one on each end. A 64 mm (2-1/2 in.) wide, 30 GA flat steel strap is attached perpendicular, and at the mid-span to the H-section of the C-H stud on the shaft side with 12.7 mm (1/2 in.) long Type S-12 screws, one at each C-H stud and one screw to the 51 mm (2 in.) long leg of J-runner at each end.

Max. Spans for 2-Hour Horizontal Membrane	
Three Layers of 12.7 mm (1/2 in.) Gypsum Panels	**Max. Span**
212CH-18	1532 mm (5 ft. – 4 in.)
212CH-34	1841 mm (6 ft. - 6 in.)
400CH-18	2140 mm (7 ft. – 3 in.)
400CH-34	2752 mm (9 ft. – 4 in.)
600CH-34	3965 mm (13 ft. – 1 in.)

4. HORIZONTAL GYPSUM BOARD: CGC/USG Sheetrock® Brand Firecode® C Panels (UL Type C)

Install three layers of 12.7 mm (1/2 in.) gypsum panels, UL Type C, to the C-section side of the assembly. The base layer is attached parallel to the C-H studs with 25 mm (1 in.) long Type S screws spaced 610 mm (24 in.) oc. The second layer is attached parallel to the C-H studs with 41 mm (1-5/8 in.) long Type S screws spaced 305 mm (12 in.) oc, with all the joints staggered 610 mm (24 in.) oc from the base layer. The face layer is applied perpendicular to the C-H studs and attached with 50 mm (2 in.) long Type S screws spaced 305 mm (12 in.) oc, starting 25 mm (1 in.) and 150 mm (6 in.) from the edge, with the butt joints located mid-span between the C-H studs, and attached with 57 mm (1-1/2 in.) long Type G screws spaced 178 mm (8 in.) oc and spaced 76 mm (3 in.) on each side of butt joint. Butt joints in the face layer shall be staggered a min. of 610 mm (24 in.)

5. VERTICAL GYPSUM BOARD:

- CGC/USG Sheetrock® Brand Firecode® C Panels (UL Type C), or
- CGC/USG Sheetrock® Brand Firecode® X Panels (UL Type ULIX, SCX, AR, USGX, IP-X1, SGX, or FRX-G)

On the vertical face install two layers of 12.7 mm (1/2 in.) gypsum panel, UL Type C, or two layers of 15.9 mm (5/8 in.) gypsum panel, UL Type ULIX, SCX, AR, USGX, IP-X1, SGX, or FRX-G, installed vertically. Base layer attached with 25 mm (1 in.) long Type S screws spaced 610 mm (24 in.) oc. Face layer attached with 41 mm (1-5/8 in.) long Type S screws spaced 305 mm (12 in.) oc. Horizontal joints between adjacent layers shall be staggered a min. of 610 mm (12 in.). Install with 57 mm (1-5/8 in.) Type S screws spaced 610 mm (24 in.) oc through the liner panel at the corner and abutments.

For more details on construction methods, including fasteners, the CGC/USG installation instructions shall be followed.

Consult the listing report on the Directory of Building Products (https://bpdirectory.intertek.com) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.