INSTALLATION GUIDE
FOR FIRESTOP COMPOSITE SHEET

Firestop Composite Sheet CFS-COS

## Contents

**Board Seaming**  
- Overlap Seam onto Composite Sheet  
- Butt Seam  
- Flange Seam  
- Supported Seam for Multi-sheet  
- Bending Composite Sheet for Corner Applications

**Board Fastening**  
- Standard Anchoring solution  
- Hilti GX (Gas) or BX (Battery) Driven Nails  
- Strut around Perimeter with Corner Anchors

**Cable Management Solutions**  
- Hilti Firestop Speed Sleeve CP 653 BA (2” or 4”)  
- Hilti Cable Collar CFS-CC  
- Floor Gang Application
Overlap Seam onto Composite Sheet

• Overlap seam between Hilti CFS-COS Composite Sheets minimum 2” with Hilti CP 619T Putty Roll between sheets.

• #10 Self-tapping screws with 1-1/4” fender washers spaced 6” maximum O.C.
Butt Seam

• 2” (50 mm) strip of Hilti CFS-COS Composite Sheet OR

• 2” (50 mm) x 26 Ga (Stainless) Steel Strip centered over the seam with 1/4” (6 mm) minimum bead of Hilti FS-ONE MAX or Hilti CP 619 T Putty Roll applied directly on the joint prior to installation.

• #10 Self-tapping screws with 1-1/4” fender washers spaced 3” maximum O.C. each side of seam.
Flange Seam

- 1/4” dia. bolt, washer (both sides) and nut, spaced at 6” maximum O.C.

- Bend a 2” (50 mm) lip of each Hilti CFS-COS Composite Sheet. Butt together and bolt completely through both sheets.

- Apply a 1/4” (6 mm) minimum bead of Hilti FS-ONE MAX Sealant or Hilti CP 619T Putty Roll between the Hilti CFS-COS Composite Sheet seam.
Supported Seam for Multi-sheet

Steps:
1. Size Hilti CFS-COS Composite Sheet with overlap on concrete minimum 2”.
2. Pre-assemble loosely the base plates, channel ties, hex bolts and spring nuts to a single Hilti Strut 1-5/8” 12 Ga (which is cut to the opening size with no gap between strut and concrete on each side).
3. Lower strut assembly in concrete opening, resting the brackets on the concrete.
4. Pre-drill holes through channel tie in concrete for Hilti KH-EZ Screw Anchors maintaining minimum edge distance of 1-3/8”.
5. Partly screw in the Hilti KH-EZ Screw Anchors with washer to concrete.
6. Slide composite sheets tightly together underneath the channel ties until the seam is centered under the ties and there is no gap between the sheets.
7. Fully tighten the hex bolts and the Hilti KH-EZ Screw Anchors.
Bending Composite Sheet for Corner Applications

- Hilti CFS-COS Composite Sheet bent 2” minimum on wall.

- Apply 1/2” (13 mm) bead of Hilti FS-ONE MAX or Hilti CP 619 T Putty Roll between the Hilti CFS-COS Composite Sheet and wall.

- For rated concrete walls: Hilti KH-EZ 1/4” Screw Anchors or Hilti 3/16” Kwik-Con II Screw Anchors with 1-1/4” fender washers spaced at 6” (150 mm) maximum O.C.

- For rated gypsum walls: minimum 3/16” (5 mm) diameter by 1-1/4” (32 mm) long steel drywall screws in conjunction with minimum 1” (25 mm) diameter steel washers.
Standard Anchoring solution

- Minimum 2” overlap Hilti CFS-COS Composite Sheet onto concrete.

- Apply a 1/2” (13 mm) minimum bead of Hilti FS-ONE MAX or Hilti CP 619T Putty Roll between the Hilti CFS-COS Composite Sheet and the concrete.

- Hilti KH-EZ 1/4”x1-7/8” Screw Anchors with 1-1/4” fender washers spaced at 6” (150 mm) maximum O.C. at perimeter of overlap. In normal-weight concrete, minimum edge distance for anchor is 1-3/8”.

Notice:
- Before handling, read Product Safety Data Sheet and product label for safe usage and health information
- Instructions above are general guidelines—always refer to the applicable drawing in the UL Fire Resistance Directory or Hilti Firestop Systems Guide for complete installation information
- CFS-COS Composite Sheet is not meant to be load bearing
Hilti GX (Gas) or BX (Battery) Driven Nails

- The minimum floor slab thickness required for GX/BX installation is 2-1/2” over metal deck, or 4-1/2” flat/PT (post-tension) with light-weight/normal-weight concrete.

- Hilti CFS-COS Composite Sheet overlap on concrete minimum 3”.

- Hilti X-GN 20 MX (3/4”) Nails with Hilti R 36-0.6 (1-1/4”) ECO fender washers spaced 4” maximum O.C.

- In normal-weight concrete, minimum edge distance for nail is minimum 2-3/8”.

---

**Notice:**

- Before handling, read Product Safety Data Sheet and product label for safe usage and health information
- Instructions above are general guidelines—always refer to the applicable drawing in the UL Fire Resistance Directory or Hilti Firestop Systems Guide for complete installation information
- CFS-COS Composite Sheet is not meant to be load bearing
Board Fastening

Strut around Perimeter with Corner Anchors

- Hilti CFS-COS Composite Sheet overlap on concrete minimum 2”.

- Hilti Strut 1-5/8” 12 Ga. around the perimeter, flush with outside edges of Hilti CFS-COS Composite Sheet.

- Hilti KH-EZ 1/4” x 1-7/8” Screw Anchors with fender washers at corners (quantity 4) and in normal-weight concrete, minimum edge distance for anchor is 1-3/8”.

- 90° Four Hole Angle Hilti MQW-3 to connect struts at corners.

- Connect angles to strut with Hilti Push Buttons MQN.
**Hilti Firestop Speed Sleeve**  
**CP 653 BA (2” or 4”)**

- Cut hole in Hilti CFS-COS Composite Sheet (2-1/2” diameter hole for 2” device, or 4-1/2” diameter hole for 4” device).
- Screw device flange of Hilti CP 653 BA (over smoke gasket) to Hilti CFS-COS Composite Sheet with at least two minimum #10 Self-tapping screws in designated flange holes.

---

**Notice:**
- Before handling, read Product Safety Data Sheet and product label for safe usage and health information
- Instructions above are general guidelines—always refer to the applicable drawing in the UL Fire Resistance Directory or Hilti Firestop Systems Guide for complete installation information
- CFS-COS Composite Sheet is not meant to be load bearing
**Hilti Cable Collar CFS-CC**

- Install Hilti CFS-COS Composite Sheet Overlap on concrete per one of the specified methods.
- Cut hole in Hilti CFS-COS Composite Sheet maximum 3" in diameter.
- Screw fastening tabs of Hilti Cable Collar CFS-CC to Hilti CFS-COS Composite Sheet with #10 Self-tapping screws and 3/4" OD washers.
Floor Gang Application

- Size Hilti CFS-COS Composite Sheet to overlap on concrete minimum 2”.
- Cut 4-1/2” holes in Hilti CFS-COS Composite Sheet for Hilti CP 653 BA Speed Sleeves (4”).
- Fasten Hilti CP653 BA Speed Sleeves (4”) in Hilti CFS-SL GP Gangplates with screws provided on sleeve.
- For large blockouts (opening size > gangplate footprint): Fasten Hilti CFS-SL GP Gangplate to Hilti CFS-COS Composite Sheet with #10 Self-tapping screws in each fastening hole.
- For smaller blockouts (At least 1-1/2” overlap of gangplate onto concrete): Fasten assembled Hilti CFS-SL GP Gangplate and Hilti CFS-COS Composite Sheet to concrete with Hilti KH-EZ 1/4” x 1-7/8” Screw in each fastening hole with a minimum 1-1/2” overlap of gangplate onto concrete.
- If less than all 4 sides overlap the concrete, refer to point above for securing non-overlapping sides to composite sheet.
The data contained in this literature was current as of the date of publication. Updates and changes may be made based on later testing. If verification is needed that the data is still current, please contact the Hilti Technical Support Specialists at 1-800-363-4458. All published load values contained in this literature represent the results of testing by Hilti or test organizations. Local base materials were used. Because of variations in materials, on-site testing is necessary to determine performance at any specific site. Laser beams represented by red lines in this publication. Printed in the United States