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FIBRE C WALL PANEL CLADDING SYSTEM

CSI Section:

07 44 53 Glass Fiber Reinforced Concrete Siding

1.0 RECOGNITION

The Rieder Faserbeton-Elemente GmbH, *fibre C* Wall Panel Cladding System has been evaluated for use as a nonload-bearing exterior wall covering. The durability, weather resistance, wind-load resistance, noncombustibility and interior finish properties of the *fibre C* Wall Panel Cladding System were evaluated for compliance with the following codes:

- 2018, 2015 and 2012 International Building Code® (IBC)
- 2018, 2015 and 2012 International Residential Code® (IRC)

2.0 LIMITATIONS

Use of the *fibre C* Wall Panel Cladding System recognized in this report is subject to the following limitations:

2.1 Installation of the *fibre C* Wall Panel Cladding System shall be in accordance with this report, the project calculations and details, installation instructions and the applicable code. If there are any conflicts between the manufacturer's published installation instructions and this report, the more restrictive shall govern.

2.2 Drawings, design details and calculations verifying compliance with this report and adequacy of the connections and supporting framing, prepared by a registered design professional when required by the statutes of the jurisdiction in which the project is to be constructed, shall be submitted to the code official for approval.

2.3 The maximum allowable wind pressure for the *fibre C* Wall Panel Cladding System is provided in Table 1 of this report. The capacities of the supporting wall and connections shall be equal to or greater than the allowable wind pressure.

2.4 For compliance with Section 1402.5 of the 2018 IBC and 1403.5 of the 2015 and 2012 IBC when installed as exterior cladding on buildings of Type I, II, III or IV construction greater than 40 feet (12192 mm) in height above grade plane and contains a combustible water-resistive barrier, the assembly shall be tested in accordance with and comply with the acceptance criteria of NFPA 285 unless conformance to the requirements of Exception 2 of Section 1402.5 of the 2018 IBC are satisfied.

2.5 When use is as an interior wall covering, with spaces between adjacent panels, the *fibre C* Wall Panel Cladding System shall be installed over a substrate having a Class A finish, complying with Section 803.1.2 of the 2018 IBC and 803.1.1 of the 2015 and 2012 IBC.

2.6 Where installed as interior cladding to fire-resistance-rated or noncombustible building elements the *fibre C* Wall Panel Cladding System shall be installed in accordance with Section 803.15 of the 2018 IBC, Section 803.13 of the 2015 IBC and Section 803.11 of the 2012 IBC.

2.7 The *fibre C* Wall Panel Cladding System shall be installed by qualified installers recognized by Rieder Faserbeton-Elemente GmbH.

2.8 The *fibre C* wall panels shall be manufactured in Kolbermoor, Germany, under a quality control program by QCC, LLC.

3.0 PRODUCT USE

3.1 General: The *fibre C* Wall Panel Cladding System shall be installed in accordance with the project specific structural calculations, details and instructions, and this report. Installation shall be by qualified installers recognized by Rieder Faserbeton-Elemente GmbH. A copy of the design and installation documents shall be available on the jobsite at all times during construction.

3.2 Design

Attachment of the *fibre C* Wall Panel Cladding System to the wall shall be designed by a qualified design professional and the design submitted to the code official for approval. The design shall include the substructure system connections used to connect the wall cladding panels to the supporting wall or substrate. Table 1 of this report provides the allowable wind load for the *fibre C* Wall Panel Cladding System. The connection capacity and the supporting substrate capacity shall equal or exceed the design uniform transverse loads and gravity loads for the cladding and substrate determined in accordance with IBC Chapter 16 or IRC Section R301.2.1, as applicable.



TABLE 1 – MAXIMUM SPACING AND ALLOWABLE TRANSVERSE LOAD

Maximum Spacing of Channels or Fasteners ^{2,3} (inches)	Allowable Transverse Load ¹ (psf)
24	39

SI: 1 inch = 25.4 mm, 1 psf = 47.9 N/m²

1. Maximum allowable positive and negative transverse (wind) load capacities were determined from ASTM E330 testing.
2. Load tests were conducted on multi-span configurations.
3. Maximum spacing for channels, fasteners, and panel spans is 24 inches. A minimum channel/fastener/span support is required for every 2.67 square feet of panel (example: 16 inches horizontally by 24 inches vertically).

3.3 Installation

3.3.1 General: Installation of the *fibre C* Wall Panel Cladding System shall be in accordance with the manufacturer’s published installation instructions and this evaluation report. If there is a conflict between this report and the manufacturer’s published installation instructions, the more restrictive prevails.

The *fibre C* Wall Panel Cladding System shall be installed over supporting walls and substructures that have been designed and constructed to resist safely the superimposed loads required by Chapter 16 of the IBC. The supporting substructure shall be securely connected to the supporting wall with corrosion-resistant fasteners.

Exterior wall assemblies shall include a water-resistive barrier, flashing, a means for draining water that enters the assembly to the exterior and protection against condensation in accordance Section 1402.2 of the 2018 IBC and 1403.2 of the 2015 and 2012 IBC or IRC Section R703.2, as applicable. A clear airspace space shall be maintained behind the wall panels. The wall panels may be cut and trimmed in accordance with the design documents and this report. A nominal gap of 3/8 inch (9.5 mm) shall be maintained at panel-to-panel and panel-to-penetration joints, except that horizontal joints and corners may be closed with joint closures and corner closures as decorative elements when specified by the building designer. A perforated galvanized steel or aluminum vent screen may be installed at the base of the wall system and at window and door heads to prevent pest and vermin infiltration into the ventilation cavity. Perforations in the vent screen shall allow a minimum opening of 2.36 square inches per linear foot (4996 mm²/m).

3.3.2 Substructure System: Connection of the substructure system, Z-channels, hat-channels and components, described in Section 4 of this report, shall be in accordance with Section 4.1.3 of this report. The channels shall be installed vertically at a maximum horizontal spacing of 24 inches (610 mm) on center. Channels shall be connected to the underlying

substrate with a minimum of one fastener every 2.67 square feet (0.25m²) of wall panel area, spaced a maximum of 24 inches (610 mm) on center. Table 1 of this report lists allowable transverse loads.

4.0 PRODUCT DESCRIPTION

4.1 General: The *fibre C* Wall Panel Cladding System is a wall covering system with open joints between panels that allows air to circulate between the back of the panels and the exterior face of the water-resistive barrier. The cladding panels are fastened to a substructure system of galvanized steel profiles. Figure 1 of this report illustrates system details.

4.1.1 Panels: *fibre C* wall panels are noncombustible, decorative, cement and fiber cladding panels complying with Section 1404.16 of the 2018 IBC, Sections 1404.10 and 1405.16.1 of the 2015 and 2012 IBC as Type A Grade II and Grade IV when tested in accordance with ASTM C1186. The panels are nominally 1/2 inch (12.7 mm) thick and are available in a variety of panel sizes, colors, finishes, and textures. Panels have a nominal weight of 5.4 psf (26.4 kg/m²). *fibre C* wall panels have a flame spread index of not more than 25 and a smoke-developed index of not more than 450 when tested in accordance with ASTM E84 and comply as Class A interior finish in accordance with Section 803.1.2 of the 2018 IBC and 803.1.1 of the 2015 and 2012 IBC.

4.1.2 Substructure: The substructure system consists of 16-gauge [0.0635 inch (1.61 mm)] 1-inch (25.4 mm) deep J-channel or hat-channel galvanized steel profiles. J-channels have a nominal width of 4 inches (102 mm). Hat-channels have a nominal width of 5 3/4 inches (146 mm). Channels shall be fastened directly to the supporting structure.

Channels shall be spaced a maximum of 24 inches (610 mm) on center. The substructure system including channels and rail extrusions, shall weigh a maximum of 1.25 pound per foot (1.86 kg/m) of component length.

4.1.3 Wall Panel Fasteners: Wall panel fasteners shall be minimum 1 3/16 inch (30 mm) long No. 12-11, self-tapping steel screws. Fasteners shall be compatible with the galvanized steel substructure profiles and the wall substrate. Wall panels shall be predrilled and the minimum fastener edge distance shall be 3/4 inch (19 mm).

5.0 IDENTIFICATION

The *fibre C* Wall Panels shall be labeled with the manufacturer’s name (Rieder Faserbeton-Elemente GmbH) and address, product name, thickness, color, finish, batch number, and the name of the approved inspection agency, Quality Control Consultants (QCC). The label shall include the IAPMO Uniform ES Mark of Conformity and the

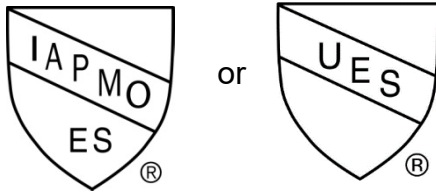


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Evaluation Report Number (ER-469). Either Mark of Conformity may be used as shown below:



IAPMO UES ER-469

6.0 SUBSTANTIATING DATA

6.1 Data and calculations in accordance with the ICC-ES Acceptance Criteria for Fiber Cement Siding Used as Exterior Wall Siding (AC90), Approved June 2012, editorially revised October 2018.

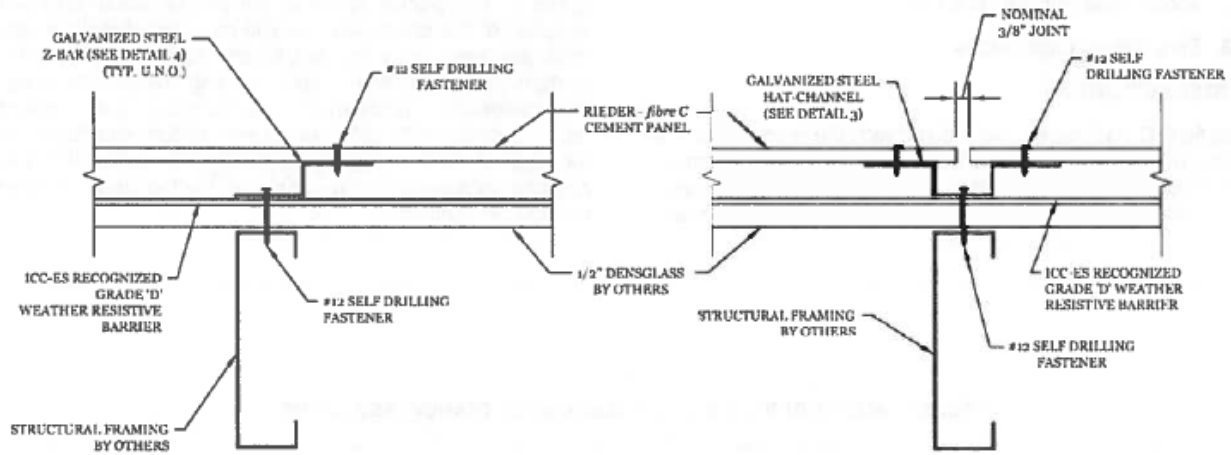
6.2 Reports of testing for noncombustible use in accordance with ASTM E136.

6.3 Test reports are from laboratories in compliance with ISO/IEC 17025.

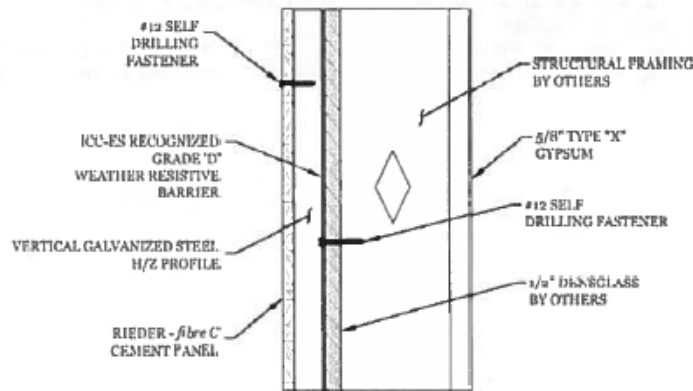
7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on the Rieder Faserbeton-Elemente GmbH, *fibre C* Wall Panel Cladding System to assess its conformance to the codes and standards shown in Section 1.0 of this report and documents the product's certification. *fibre C* Wall Panel Cladding System components are produced at locations noted in Section 2.8 of this report under a quality control program with periodic inspection under the supervision of IAPMO UES.

For additional information about this evaluation report please visit www.uniform-es.org or email at info@uniform-es.org



HORIZONTAL SECTION-INSTALLATION DETAILS



VERTICAL PROFILE INSTALLATION



GALVANIZED STEEL HAT CHANNEL PROFILE



GALVANIZED STEEL Z-BAR PROFILE

FIGURE 1 – System Details