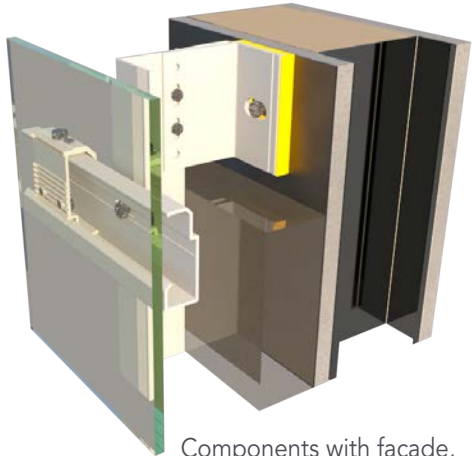


STANDARD INSTALLATION GUIDELINES

XKELEX X-CS25



Components with facade,
insulation over steel stud wall

APPLICATION

The X-CS25 provides a concealed fastening solution with back of panel clips that allow the panel to be hung and leveled on the horizontal rail resulting in an aesthetically pleasing rainscreen design.

The system provides leveling capability and is ideal for large panel formats. Combining with the X-BK system allows the installer to level the facade in 3 axis and it has the capacity for continuous exterior insulation while maintaining a ventilation space from the face of exterior insulation to the back of the panel.

System depths vary depending on systems components selected.

SYSTEM COMPONENTS



Hanger Clip X-CL25



Hanger Clip X-CL25-L



Rail X-RL25

Fasteners



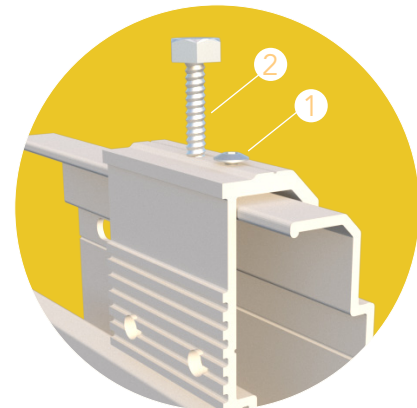
Rail anchor (clip to rail)¹
#12 x 7/8"



Fixing Screw (rail to substructure)
1/4"-14 x 1-5/8" 305 stainless steel, self tapping screw



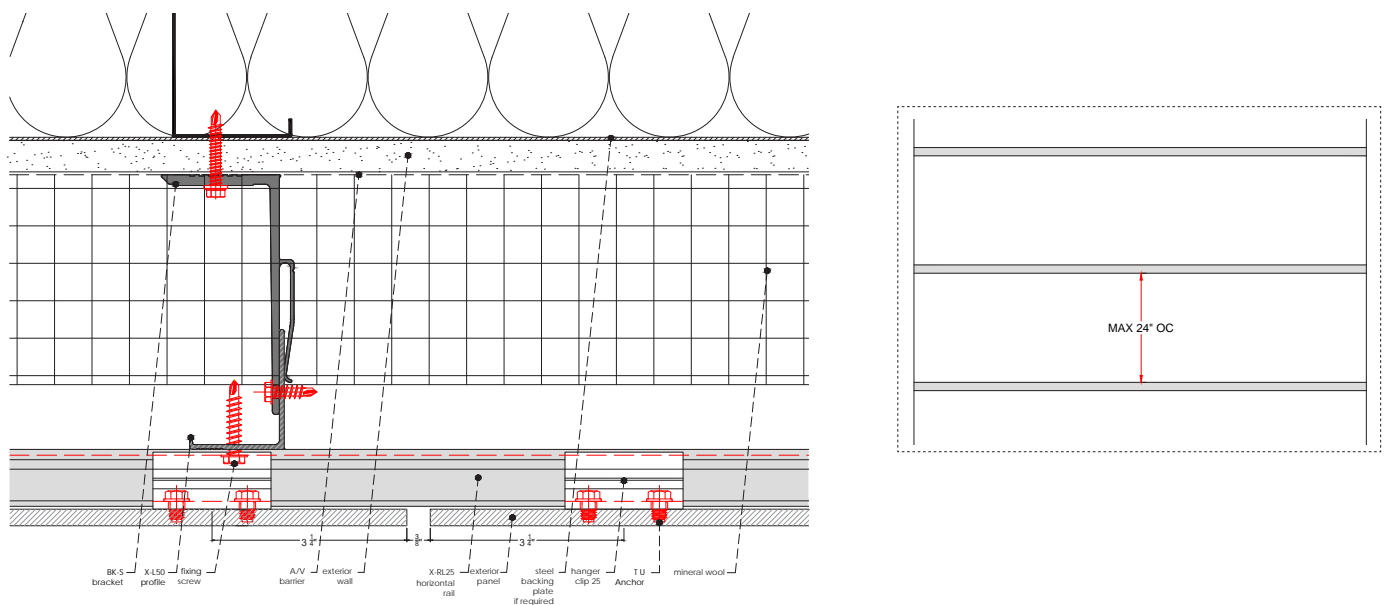
Level screw (adjustment fastener)²
M6 x 3/4"



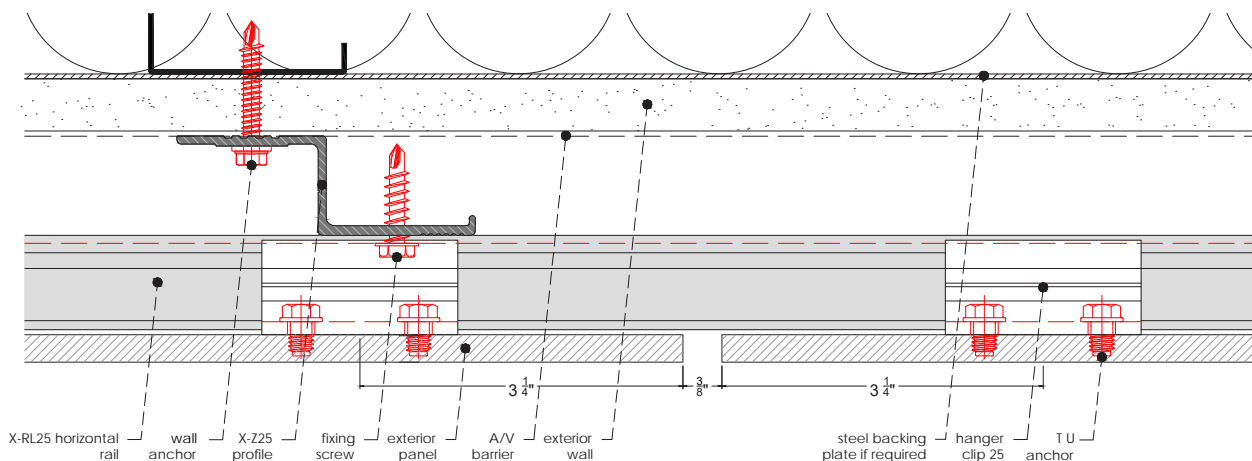
CONSTRUCTION PRACTICE

1. Air space at top and bottom of wall or at wall termination to be 25 mm (1") to facilitate airflow from behind the panels. Do not block vertical airflow at windows, doors, eaves, or at the base of the building. Airflow needs to be continuous from bottom to top so there is air movement behind each panel.
2. A metal drip edge may be used at window heads, door heads and the panel base, but it must not restrict airflow (minimum 3/4"; 1" at base openings).
3. Install panels from bottom of wall to top of wall.
4. For straight walls, start panel installation in center and work outward.
5. For walls with inside corners, start installation there and work left to right across wall.

X-CS25-BK system

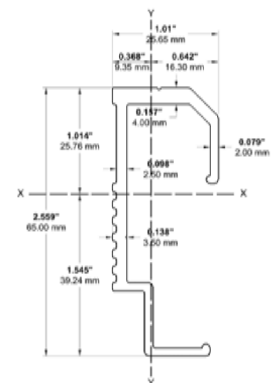
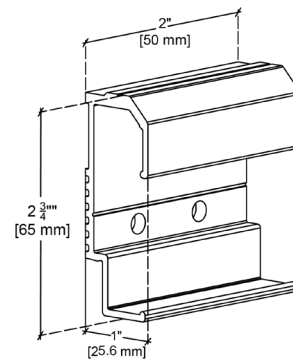
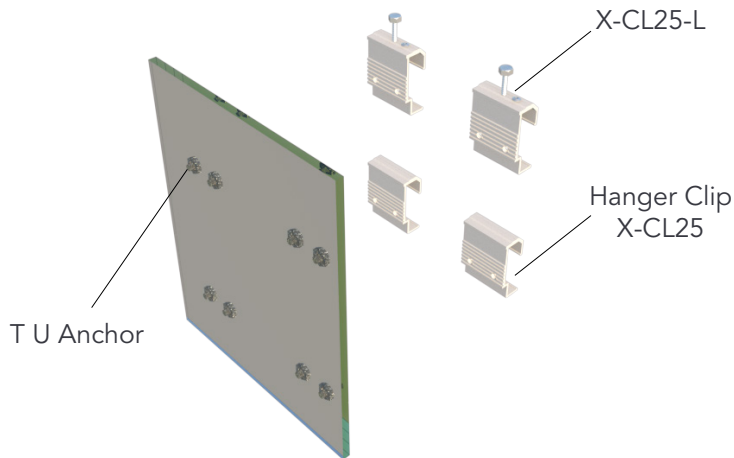


X-CS25 system



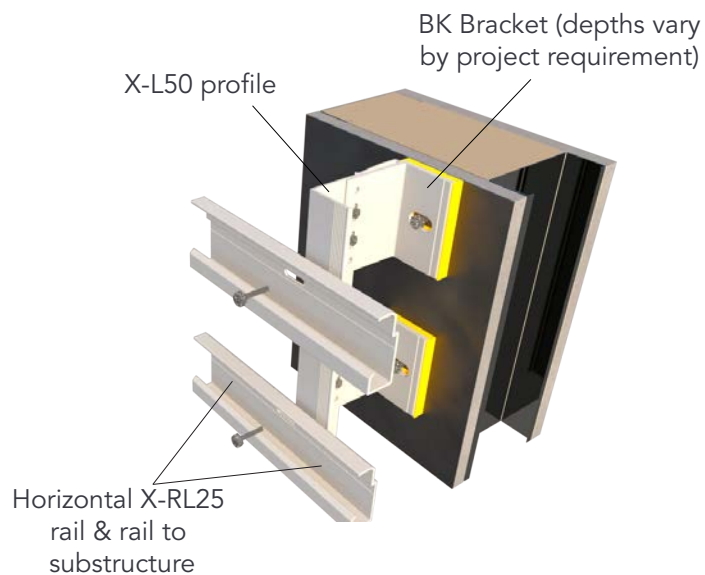
TYPICAL INSTALLATION

These guidelines represent an abbreviated illustration for proper installation of architectural panels in a ventilated rain screen application using the X-CS25 and combining with the X-BK attachment system.

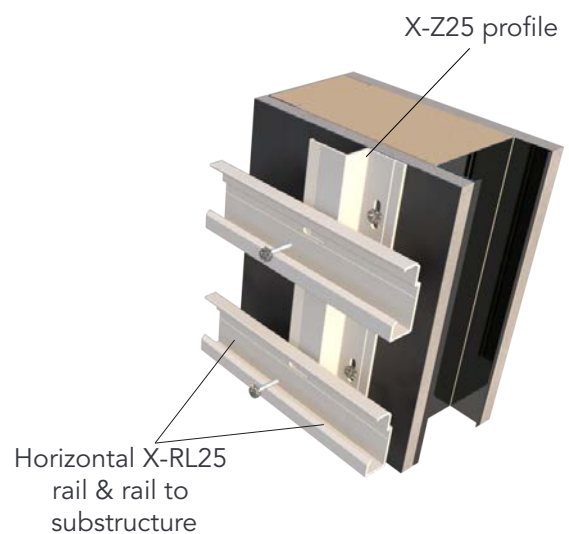


Hanger Clip X-CL25 dimensions

Installation X-CS25-BK system



Installation X-CS25 system



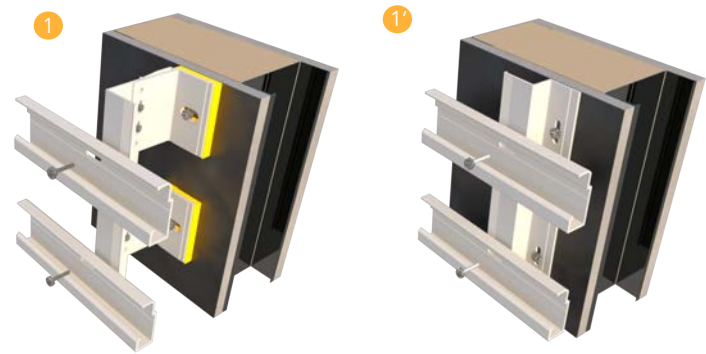
INSTALLATION SEQUENCE

! Installation locations must be in accordance with rainscreen panel manufacturer requirements and using approved shop drawings.

1. Horizontal Rail Attachment

Attach horizontal rail RL25 to BK bracket system¹ or X-V25 profile¹ depending on system selected using fixing screw (rail to substructure).

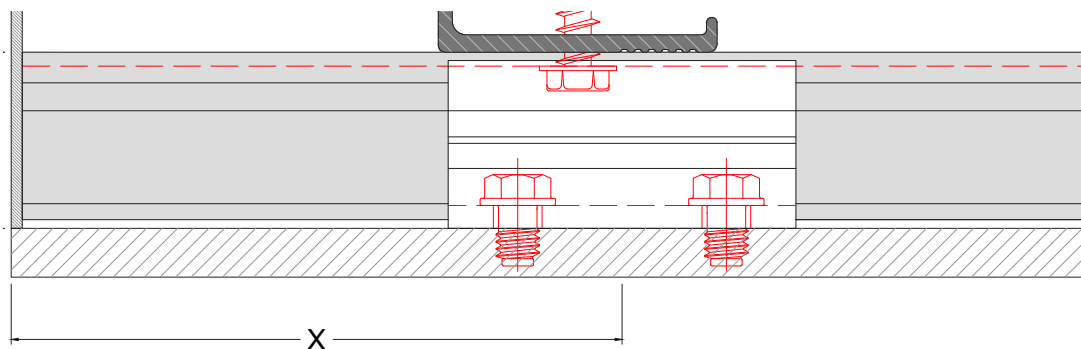
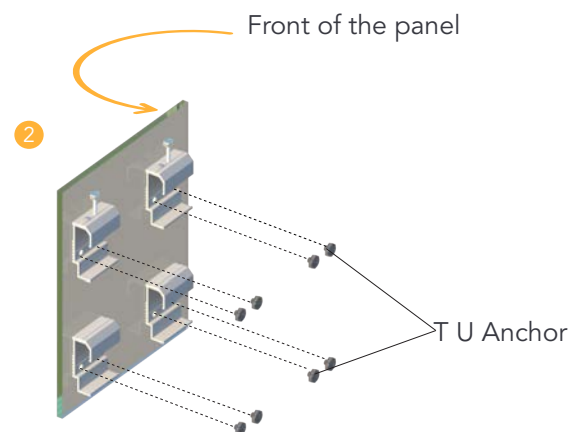
! Horizontal rail shall be level prior to fastener installation.



2. Hanger Attachment of Facade Panel

Align CL25 / CL25-L hangers to be level horizontally on back of panel, then attach to back of panel following the specifications with hidden anchor manufacturer's requirements. Panel can then be hung to RL25 rail, use two CL-25-L at top corners of panels to level panel. Fix with fixing screw (rail to substructure) on one CL-25 clip per rail to set expansion direction of panel.

! Always use manufacturer specified anchor for clip to panel installation



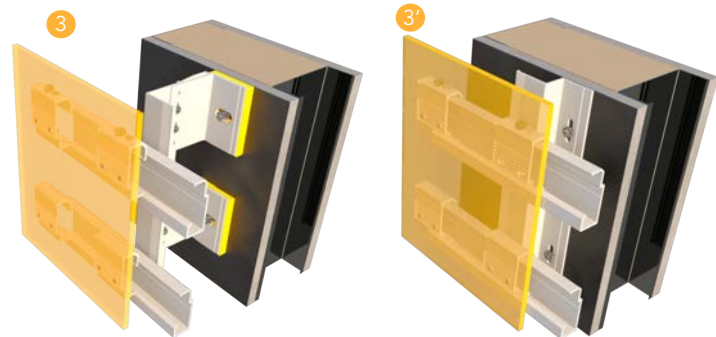
Corner detail

Corner distance may vary based on panel manufacturer requirements. Follow the maximums and minimums as recommended by the rainscreen panel manufacturer guidelines.

3. Hang, adjust and secure facade panel onto X-RL25 horizontal rail

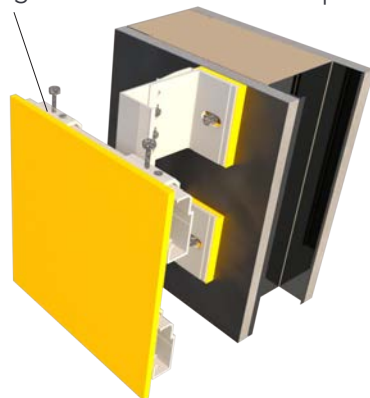
Step 1:

Hang and hook CL25 hanger clip onto horizontal rail RL25. (BK bracket system³ or X-V25 profile³ depending project requirements)

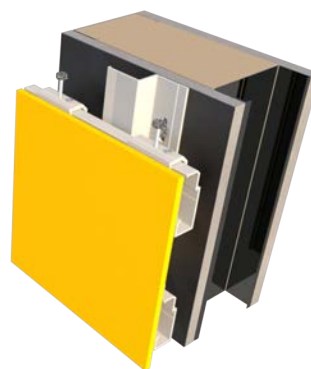


Step 2:

Level rail by tightening leveler screw on X-CL25-L clips at each end of panel (replace tighten level screw to level panel)



Fixed to X-L50 profile



Fixed to X-V25 profile

⚠ It's important to ensure that the orientation of hangers are leveled.

Step 3:

One fixed point attachment is required per panel through the X-CL25-L clip on the upper rail using the self drilling #12 x 7/8" fastener. This may vary by panel manufacturer - verify number of fixed points based on manufacturer requirements.

BUILDING/STRUCTURE

1. Architect / Engineer / Contractor to design and build structurally sound, water-tight exterior wall.

- Substructure Horizontal Straightness Tolerance:

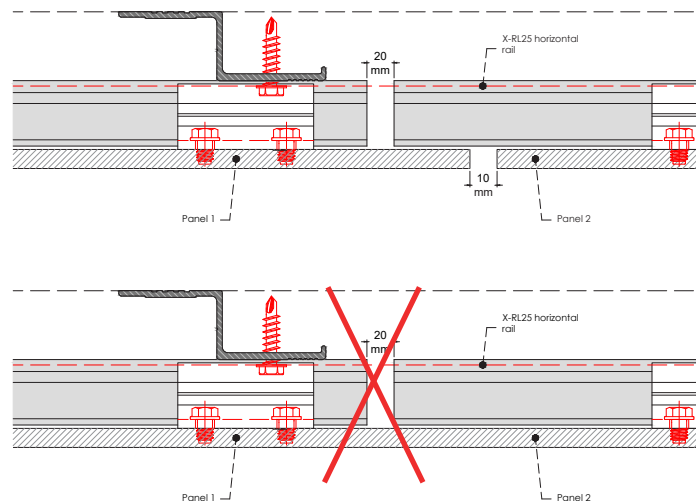
± 3.0 mm per 2 m (± 0.0625" per 42")

- Substructure Vertical Straightness Tolerance:

± 0.5 mm per 600mm (± 0.0625" per 75")

2. Attach profiles to exterior walls. Structural engineer to determine fastening/affixing specification, i.e. quantity and type of attachment and fasteners, based upon exterior wall construction. Fasteners in profile must accommodate thermal expansion/contraction of metal and not interfere with panel application. Shortening the length of the profiles can minimize thermal expansion and contraction.

3. XKELEX Z-25 Profiles are 6063-T5 aluminum with custom cross-sectional shapes with thicknesses varying from 2 – 3mm. Profile depth is 3/4" or 1" depth. BK system depth varies based on BK bracket and continuous insulation depths. Always provided minimum air cavity per rainscreen panel manufacturer requirements.
4. Two Z25 profiles are used at horizontal joints. One H25 profile is used at vertical joints. The maximum profile length is 10 feet.
5. Profiles to be installed straight, plumb, level and aligned correctly on the building. The typical application for this system is a wall assembly without exterior insulation. The Z25, H25 and the BK brackets are fastened through the sheathing and into the studs using stainless steel fasteners as required per shop drawings or the licensed engineer for the project.
6. The profiles are spaced max. 24" on center up the wall.
7. It is recommended to take field measurements before panels are cut or drilled. Field measurements verify print dimensions to ensure proper fit.
8. Spacing between horizontal profiles to be ≥ 20 mm (3/4"). A joint between the horizontal profiles must always coincide with a joint between the panels. The joint is preferably continued at the same horizontal height among adjacent profiles. (Reduces stress in panels).
9. For structures with exterior insulation, follow the insulation manufacturer's installation instructions. Vertical metal profiles (the same depth as the exterior insulation) can be attached to the exterior wall. The Z25 or the BK bracket metal profiles are then attached to the vertical profiles.



PREPARE PROFILE

1. Typical vertical and horizontal joints are left open and have a black background (use a black weather and UV resistant building wrap). Metal profiles visible at joint openings (vertical or horizontal) are powder coated black. If a SS fastener is visible in a joint you may cover with a black weather and UV resistant tape or building wrap.
2. Horizontal and vertical joints can be closed with aluminum profiles (21 gauge or less) if desired.

FIXING

1. Fixing pattern is typically either 16" or 24" on center horizontally and 16" to 24" on center vertically, depending upon building height, building location, design criteria/specifications, and wall substrate type, or stud locations on building (backing plate may be required to carry rainscreen load back to structural wall). Edge areas on facades and high wind load conditions require closer fixing distances. Structural engineer to determine spacings. The maximum allowable spacing is 24".

2. In the CS25 system one fixed points is required per panel, starting point from the top left corner . Fixed points (for attachment to horizontally oriented profiles) are:

- Always the same height in each panel.
- As close to center of panel as possible, and then either the next adjacent point above or below.

PRODUCT SUSTAINABILITY STATEMENT

XKELEX substructure is manufactured using architectural grade aluminum and may be recycled at the end of building life or at any future time of re-cladding of the building. Using high quality aluminum offers green attributes to the exterior building envelope and may contribute to LEED requirements of the building construction.