Façade Systems

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Content

1. Clarification Façade Systems
2. Stick System Façades
3. Unitized Window Walls
4. Mitred Unitized Façades
5. Butt Jointed Unitized Façades
1. Clarification
Façade Systems

1. Clarification

Unitized Curtain Wall = Unitized Façade = glazed externally
European Window Wall = Unitized Facade = glazed internally
American Window Wall = Horizontal Ribbon Facade
   = glazed externally or internally
European Curtain Wall = Window Wall or Stick System
American Curtain Wall = Could be everything
American Unitized System = Butt Jointed = Chicken Head
European Unitized System = Mitered = Spigot Connection
Façade Systems

1. Clarification

- Traditional Facade
  - Stick Installation
  - Ladder Installation

- Unitized Facade

Time on site vs. Time in Workshop
Façade Systems

2. Stick System Façades
Façade Systems
2. Stick System Façades

- Individual components installed in the field
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2. Stick System Façades

• Ventilation and Drainage System FW 50
Façade Systems

2. Stick System Façade

- Differential deformation varies from mullion to mullion during floor slab deflection
- No stiff transom/mullion connection
- No longer rectangular corners
- Glass floating in glazing rebate
- Larger rebates for warping needed
The most accurate way to calculate screen movement is by using a break down of individual mullion movement rather than a single mid span figure.
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2. Stick System Façades

Glass width

Height of infill
Glass height

„Leeway“ in the rebate

2.36 in
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3. Unitized Window Walls
Façade Systems

3. Unitized Window Walls
Façade System

3. Unitized Window Walls
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4. Mitered Unitized Façades
   I. Cover Caped System
   II. Structural Bonded System
   III. Structural Taped System
Façade Systems

4.1 Cover Caped System

Vertical unit joint

Horizontal unit joint
Façade Systems
4.1 Cover Caped System
Façade Systems

4.1 Cover Caped System
Façade Systems

4.1 Cover Caped System

- Vertical vapor barrier
- Horizontal vapor barrier
- Saddle gasket
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4.1 Cover Caped System
Façade Systems

4.1 Cover Caped System

- Unit corners are fabricated using cleats in the same manner as window vents/frames

- Cleats can be crimped or nailed, and are filled with 2-part adhesive to complete the bonding process

- A Schueco 4-head crimper is the best crimping machine to use, as it will even out any slight inaccuracies across all 4 corners
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4.1 Cover Caped System
Façade Systems

4.1 Cover Caped System
Façade Systems

4.1 Cover Caped System

- One bracket will be fixed bearing point
- Next bracket to allow sliding bearing point
- Height adjustments to be “locked”
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4.1 Cover Caped System
Façade Systems

4.1 Cover Caped System
Façade Systems

4.1 Cover Caped System
• No rotation of units possible
• During slab deflection, vertical racking of units occurs
• Units move closer to each other
• Vertical joints remain parallel
• Horizontal joint staggering
• Saddle gasket to compensate for staggering effect
Façade System

4.1. Cover Capped System
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→ 4. Mitered Unitized Façades
   II. Structural Bonded System
Façade Systems

4.11 Structural Bonded System

• Fully Structurally Glazed, vertically and horizontally
• Project specific solution due to glass bonding
• Glass thickness 26 to 36mm
• Horizontal gap of 10 or 20mm
Façade Systems

4.II Structural Bonded System
Façade Systems

4.11 Structural Bonded System
Façade Systems

4. Mitered Unitized Façades
   III. Structural Taped System
5. Butt Jointed Unitized Façade System
Façade Systems
5. Butt Jointed Unitized Façades
Façade Systems

5. Butt Jointed Unitized Façades

Male/female connection

Seal at junit joint
Façade Systems
5. Butt Jointed Unitized Façades

• Units rotate at bracketry
• Vertical joint no longer parallel, will become triangular
• Mullions butting top or bottom
• When mullions butt, units lift up from brackets and rotate
• Units start to stagger
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5. Butt Jointed Unitized Façades
Façade Systems
5. Butt Jointed Unitized Façades
Thank you for your attention.