The Fusion Of Strength And Efficiency

Curtain Wall Systems

- Advanced Composite Design
- U Values as low as 0.21
- CRF (frame) up to 90
- 20 PSF Water Tested/Certified
- 60 PSF Design Pressure

Finally, a curtain wall framing system that equals the thermal performance of glass.

FM Graham’s GThurm™ curtain wall provides unsurpassed thermal resistance in an engineered composite design using continuous strand glass reinforcement to match the strength of aluminum.
Using our decades of combined engineering experience with aluminum curtain wall, we designed our GThurm fiberglass composite curtain wall to match aluminum’s strength while far surpassing it in thermal performance.

GThurm curtain wall uses the same sound principles of weathering and anchorage proven in our aluminum products.

We pultrude GThurm curtain wall using our revolutionary G2RP process, featuring continuous stranded glass fiber embedded in polyurethane. G2RP exhibits extraordinarily high thermal resistance, high strength, and it's highly resistant to condensation.

Our GThurm curtain wall was designed to equal the structural performance of our aluminum products.

“G2RP has 700 times less thermal conductivity than aluminum”

GThurm framing is essentially all thermal break. Aluminum framing must compromise the structure by incorporating supplemental thermal breaks to separate warm and cold surfaces.

GThurm curtain wall is nearly immune from typical aluminum system problems like thermal “short circuits” and thermal expansion in the “warm side” of systems. GThurm is 700 times less conductive than aluminum, virtually eliminating the cold spots that can lead to damaging condensation problems.

Modulus of elasticity comparisons of GThurm and aluminum show that while the initial strength of aluminum is greater, GThurm continues to exhibit high strength long after aluminum deflects.

The G2RP framing components virtually eliminate the thermal conductivity issues experienced with aluminum framing. Our 80% glass G2RP framing creates a homogenous relationship with the glass it encases.

<table>
<thead>
<tr>
<th>TYPE</th>
<th>TEST SIZE</th>
<th>AIR (cfm/ft²)</th>
<th>WATER (psf)</th>
<th>DESIGN PRESSURE (psf)</th>
<th>UNIFORM LOAD STRUCTURAL (psf)</th>
<th>U-VALUE</th>
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<tbody>
<tr>
<td>GThurm Curtain Wall</td>
<td>80 x 80</td>
<td>0.01</td>
<td>20</td>
<td>60</td>
<td>90</td>
<td>0.34</td>
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<td></td>
<td></td>
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GThurm HIGHLIGHTS
- U values as low as 0.21
- CRF (Frame) up to 90
- Low embodied energy
- Installs using the same anchorage designs as our aluminum systems
- Engineered profiles use continuous strand glass reinforced composite to equal aluminum structural performance

STANDARD FEATURES
- 10-Year limited warranty
- Fully captured or vertically butt glazed
- Split finish
  - Exterior finish - 2605 or anodized Interior finish 624
- Stainless steel fasteners
- Isolator gasket installed at factory
- GThurm pressure plate pre-drilled and weeped to reduce field labor
- EPDM glazing gaskets
- Factory fabricated and assembled frames
- Snap covers available in various depths and profiles

OPTIONAL FEATURES
- Sunshades
- Light shelves
- Zero sight line vent

GLAZING OPTIONS
- Single, double, or triple insulated glass
- Insulating glass units up to 1½” thick

* AAMA 624 finish for fiberglass is comparable to AAMA 2604 for aluminum
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### Thermal Performance Modeling

- **GThurm**
  - 80% fiberglass
  - 20% polyurethane
  - Flexural strength 300% higher than typical polyester and vinyl ester fiberglass

- **6061 T6 Aluminum**
  - 10,000 KPSI modulus of elasticity

Modulus of elasticity comparisons of GThurm and aluminum show that while the initial strength of aluminum is greater, GThurm continues to exhibit high strength long after aluminum deflects.

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GThurm Curtain Wall 80 x 80

<table>
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<th>TYPE</th>
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Split Mullion Design to Accommodate Factory Assembled Frames, Setting Tolerances, and Field Movements

Actual Thurm 6.3 thermal modeling results showing a comparison between conventional aluminum and GThurm.