



Technical Bulletin
Rev. 1/5/07

Maximum Sizes - Insulating Units

The following recommendations are based on industry guidelines, IGMA and GTA recommendations and Vitro America's experience as an insulating unit manufacturer, a temperer and distributor. We have taken into account maximum air space volume vs. seal failure rates, bow and warp of tempered glass, air space thickness and the likelihood of glass damage or breakage during handling and transportation.

Size Limitations

Maximum Width: 84" **Minimum Size:**
Maximum Length: 144" **6 X 6 or 4 X 8**

<u>Glass Thickness</u>	<u>Spacer Width</u>	<u>Max. Area</u>	<u>Max. Length</u>
2.5 mm	Any spacer	12.00 sq. ft.	72"
3.0 mm	Any spacer	20.00 sq. ft.	84"
4.0 mm	3/16" and 1/4"	20.00 sq. ft.	84"
	5/16" to 3/4"	30.00 sq. ft.	84"
5.0 mm	3/16" and 1/4"	20.00 sq. ft.	96"
	5/16" and 3/8"	30.00 sq. ft.	120"
	7/16 to 3/4"	40.00 sq. ft.	120"
6.0 mm	3/16" and 1/4"	20.00 sq. ft.	96"
	5/16" and 3/8"	40.00 sq. ft.	120"
	7/16 to 3/4" (non-CFP)	50.00 sq. ft.	144"
	7/16 to 3/4" (CFP)	60.00 sq. ft.	144"

Units using glass nearing the maximum size may need to be tempered to prevent breakage during fabrication and transit or from thermal stress.

CFP - Vitro America has several production locations that are members of the "Certified Fabricator Program" offered by PPG Industries and Guardian Industries. Because our CFP locations have met the stringent requirements of these programs, they are able to offer larger insulating glass units than our other locations and still offer the standard Vitro America warranty.



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Insulating units that exceed these recommendations will be made only if our production supervisor agrees, and if the customer signs a waiver (see page 4) acknowledging the high probability of seal failure, glass rubs, glass breakage and possible human injury from oversized units. No warranty will be offered on such units, if they are produced.

Laminated Glass in Insulating Units

The use of laminated glass in insulating units for sloped glazing, sound control and other specialized uses, is increasing almost daily. Vitro America is frequently asked to make relatively large insulating units with laminated glass. Since laminated glass is weaker than the same overall thickness of monolithic glass, it is difficult to fabricate and handle laminated glass insulating units without increased breakage. This represents a physical danger to both Vitro employees and our customers; and it can also lead to misunderstandings about the financial responsibility for such breakage.

Because of these factors, Vitro America will limit laminated glass insulating units to the following maximum sizes. The limitations for monolithic glass insulating units will also apply.

Size Limitations – Laminated Glass

<u>Glass Thickness</u>	<u>Maximum Area</u>	<u>Maximum Length</u>
7/32" Laminated Glass	25.00 sq. ft.	84"
1/4" Laminated Glass	30.00 sq. ft.	84"
3/8" Laminated Glass	50.00 sq. ft.	120"
1/2" Laminated Glass	50.00 sq. ft.	144"

Heat absorbing glass may need to be tempered or heat strengthened to avoid thermal stress breakage. Sloped glazing may also require thicker glass and/or tempered or heat strengthened glass to withstand the thermal, wind and snow loads that may be applied to the glass. Any unit going in sloped glazing MUST have a 1/2" air space and a silicone secondary seal. Always consult with the design architect or engineer when installing sloped glazing.

Notes



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Units using spacers over ½” wide must not exceed an air space volume of 5,000 cu. in. (width X length X air space thickness; all in inches).

Units made with heat absorbing glass may need to be Heat Strengthened or Fully Tempered to avoid thermal stress breakage. See Vitro America’s Technical Bulletin 1/15/08 *Thermal Stress – Avoiding Glass Breakage*.

Units used for sloped glazing (more than 15° off vertical) **MUST** use a ½” or wider air space. These units must be dual sealed with a silicone secondary seal.

Units using glass nearing the maximum size may need to be tempered to prevent breakage during fabrication and transit or prevent thermal stress breakage.

Insulating units that will be installed at or will travel through high altitudes (3,000 feet or higher) must have breather tubes. Breather tubes must be crimped at the time of installation. It is the responsibility of the glazing contractor to order breather tubes if they are needed. See Vitro America’s Technical Bulletin 1/1/07 *Insulating Units and Breather Tubes*.

Insulating units may not exceed 500 lbs. total weight.



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**OVERSIZED INSULATING UNITS
PRODUCTION WAIVER**

I certify that I have been warned that the insulating unit(s) I have ordered exceed the limitations recommended by Vitro America. I acknowledge the high probability of seal failure, glass rubs, scratches, glass breakage and possible human injury or death from oversized units. No warranty will be offered and no legal liability will be accepted by Vitro America on such units. I will accept all legal liabilities involved with this order.

I agree to indemnify and hold harmless, Vitro America from any legal issues arising from the purchase, transportation, handling or installation of these units.

In spite of this warning, I want to proceed with this order.

Print Name _____

Signed _____

Date _____

Company _____

Address _____

City, State, Zip Code _____



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