

Where the Window becomes the Wall®



LandVac®

Tempered Vacuum Insulating Glass



LandVac Tempered Vacuum Insulating Glass has created the ultimate in thermal glazing technology and is available today in North America through VIG Technologies. VIG Technologies was formed for the distribution of LandVac tVIG™ units and the development of LandVac tVIG™ factories throughout North America. VIG Technologies believes that the development of LandVac tVIG™ manufacturing plants in North America will benefit all levels of the glass industry and the world we live in.

The ultimate in thermal
glazing technology for a
new environmental standard

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LandGlass

For your next leap

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◀ LandVac tVIG[™] vs Traditional IGUs ▶

VIG
Technologies



Parameters	Single Glass	Insulated Glass	Triple Glass	LandVac
U -Value(W/m ² K)	5.68	1.53	1.02	0.40
Btu/h·ft ² ·F	1.00	0.27	0.18	0.07
R-Value	1.00	3.70	5.56	14.30
Thickness	6-10mm	25.4mm	44.4mm	8.3mm
Visible Light Transmittance	90%	70%	63%	70%
The Weighted Sound Reduction Rw (C;Ctr)	29 (-2;-3)dB	31 (-2;-5)d	32 (-1 ;-5)dB	36 (-2;-3)dB
Seal Strength	NA	150psi	150psi	3000psi

What's LandVac tVIG™?

LandVac Tempered Vacuum Insulating Glass (tVIG™) is the ultimate in new thermal glazing. The outstanding revolutionary attributes of our LandVac tVIG™ units includes outstanding thermal performance, dramatic noise reduction and the elimination of condensation.

LandVac tVIG™ stands alone in the VIG world by featuring SGCC tempered safety glass combined with our patented, flexible Cool-Seal™, non-lead metal seal, ensuring higher vacuum capability and longer life.

The inclusion of fully tempered glass enables the LandVac tVIG™ to be used globally across indoor and outdoor temperature extremes which cause failures in competitive non-tempered VIG units.

The people behind LandGlass created our tempered tVIG™ because of our industries concern about the environment, window to wall ratio and the comfort and health of people that live and work in buildings.



Summary

- ▶ LandVac tVIG™ dramatically improves thermal insulation, thereby reducing carbon emissions when compared to double, triple, and thin glass triple IGUs.
- ▶ SGCC certified tempered safety glass.
- ▶ Condensation free units down to minus 50°C.
- ▶ Substantial sound reduction with STC ratings of up to 39db.
- ▶ Cool-Seal™ non-lead metal seal capable of high vacuum and long life.
- ▶ Thin light weight units integrate seamlessly into existing frames, new windows and curtain walls.
- ▶ Successful in all elevations eliminating the need for cap tubes in transportation.

What's so special about Landvac?	What does this mean for you?
■ Outstanding thermal performance with substantial reduction in carbon emission	Comfort and environmentally friendly for a greener planet
■ SGCC tempered safety glass	Safety, durability, less breakage due to shipping
■ No condensation	Allowing windows and doors visual transparency
■ Improved noise abatement	Quiet inside environment
■ Super long life tested over 40 years of useful life	Wise investment, seal strength up to 3000psi
■ Outstanding aesthetically pleasing units	Beautiful windows and doors
■ Slim light weight structure	More units per truck load, less labor during installation, better adaptability to existing frames
■ Lead free recyclable materials	Healthy environment
■ Improves solar performance	Better usage of natural light
■ Can be made into a tVIG IGU Hybrid	Better customization
■ No cap tubes	Units can be installed & transported at any elevation

Ultimate slim design for maximum indoor comfort

Light and energy performance (1)

LandVac	Total Thickness (mm)	LT (%)	LR ext (%)	LR int (%)	SHGC	U-Value (W/m ² I)	U-value (Btu/h·ft ² ·F)	R-Value	Noise Reduction Rw (C;Ctr)
4TL+0.3V+4T	8.3	70	14	13	0.37	0.40	0.07	14.3	36 (-2;-3)
5TL+0.3V+5T	10.3	70	13	13	0.37	0.40	0.07	14.3	36 (-2;-3)
6TL+0.3V+6T	12.3	70	13	13	0.37	0.40	0.07	14.3	36 (-2;-3)

Light and energy performance (2)

Dimension	Maximum	1.45m x 2.45m(58"X96")
	Minimum	0.3m x 0.3m(12"X12")
Shape	Standard	Square or rectangle
	Special Shape	Special Order
Laminated Glass	Available	
	Option: As per requirements	



Remarks: The above data is for reference only. The specific product parameters need to be calculated separately. For parameters related to a specific product, please refer to the data provided by LandGlass.



Compare LandVac tVIG™ to double and triple pane IGUs:

	Configuration	U-Value (W/m ² I)	U-value (Btu/h·ft ² ·F)	R-Value	Thickness (mm)	Weight (kg/m ²)
LandVac	4TL+0.3V+4T	0.40	0.07	14.30	8.30	20
Double-Pane IGU	6+12+6	1.53	0.27	3.30	25.40	20
Triple-Pane IGU	6+12+6+12+6	1.02	0.18	5.60	44.40	30

Compare LandVac tVIG™ door to conventional double and triple pane refrigeration doors (provided by LandVac customer):

Refrigerator Door	Cooling Mode	Condensation N/Y	Electric Fee (USD/month)	Working Time for compressor (h/day)
Triple-Pane door with electrical heating	Air Cooling	N	321	13
LandVac tVIG™ door	Air Cooling	N	214	8
LandVac tVIG™ door	Direct Cooling	N	171	7
Remarks	1. Testing Condition: Inner door -15 °C ; Outer door 25 °C , humidity 85% 2. Testing Amount: 11 Refrigerators with 2 glass doors for each one 3. Testing Term: one month			



Double-Pane IGU



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www.LandVac.net
www.VIGtechnologies.com

LandVac tVIG™ brings high thermal value condensation free doors to the commercial refrigeration industry. LandGlass's laboratory experiments have concluded that LandVac tVIG™ can save between 34%-43% in energy savings compared to today's normal commercial refrigerator doors.

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