Windloads Data Sheet

Wind load is the impact of any pressure that the wind exerts on a structure. Wind load assessment is essential to determine wind pressure when designing a facade to ensure design feasibility. Wind load calculation of facades is critical as it can cause deflections leading to visual distortion and reliability issues of the facade system.

Deflections in an Insulated Glass Unit (IGU) depend on the maximum glass dimensions, glass type, spacer width, and wind loads. This document goes over the impact of wind loads on various View Smart Glass make-ups.

Referenced Standard

- ASTM E1300 - 09a Standard Practice for Determining Load Resistance of Glass in Buildings

Notes

- Estimated wind loads are for 5’ x 10’ IGUs only with a glazing angle of 90 degrees. Any change in size of the IGU or glazing angle with vary the results. Consult product@view.com for data on additional sizes.
- The conclusions are based on modeling using ASTM E1300-9 for wind gusts of 3 secs
- While there are no set guidelines, the facade industry uses a defection of 0.75”-1” generally acceptable.
- This is a rough order magnitude and we suggest reaching out to industry experts to get opinion on industry best practices for size vs spacer widths and effect of wind and snow loads on IGU’s.
- For more information or other questions, contact the View Product team at product@view.com

Disclaimers

- The assessment made regarding wind loading is based on literature and modeling of glass only. The glazier has the final responsibility to comply to the ASTM specification for the entire system.
- The glass has been properly glazed in the opening in conformance with View’s recommendations.
- Glass is continuously supported along all four edges.
- Neither View, Standard Design Glass (SDG) nor GANA guarantees and each disclaims any responsibility for any particular results relating to the use of the Window Glass.
- Design 5 Software Program. View, SDG and GANA disclaim any liability for any personal injury or any loss or damage of any kind, including all indirect, special, or consequential damages and lost profits, arising out of or relating to the use of the Window Glass Design 5 Software Program.

Legend - Deflection (in)

≤ 1	Comfortably meets permissible deflection limits
> 1	Not recommended

5’ x 10’ Insulating Glass Unit (IGU)

		Wind Loads PSF (kPa) (Deflection is shown in inches)																						
Makeups		25 (1.2)	30 (1.44)	35 (1.68)	40 (1.92)	45 (2.16)	50 (2.4)	55 (2.64)	60 (2.88)	65 (3.12)	70 (3.36)	75 (3.6)	80 (3.84)	85 (4.08)	90 (4.32)	95 (4.56)	100 (4.8)	105 (5.04)	110 (5.28)	115 (5.52)	120 (5.76)	125 (6)	130 (6.24)	135 (6.48)	140 (6.72)
Outboard - spacer- inboard																								
Dual Pane	6 mm - 12.7 mm - 6 mm	0.71	0.8	0.88	0.95	1.01	1.07	1.13	1.19	1.24	1.29	1.34	1.38	1.43	1.47	1.51	1.55	1.59	1.63	1.67	1.7	1.74	1.77	1.8	1.84
	6 mm - 12.7 mm - 8 mm	0.56	0.63	0.7	0.77	0.83	0.89	0.94	0.99	1.04	1.09	1.13	1.18	1.22	1.26	1.3	1.34	1.38	1.41	1.45	1.48	1.52	1.55	1.58	1.62
	6 mm - 12.7 mm - 10 mm	0.42	0.48	0.54	0.6	0.65	0.7	0.75	0.8	0.84	0.88	0.93	0.97	1	1.04	1.08	1.11	1.15	1.18	1.21	1.25	1.28	1.31	1.34	1.37
	6 mm - 12.7 mm - (6 mm| 1.52mm PVB | 6 mm)	0.44	0.49	0.53	0.58	0.62	0.65	0.69	0.73	0.76	0.79	0.82	0.85	0.88	0.91	0.94	0.97	0.99	1.02	1.05	1.07	1.09	1.12	1.14	1.17
	6 mm - 15.9 mm - (6 mm| 1.52mm SGP | 6 mm)	0.23	0.26	0.3	0.33	0.36	0.39	0.41	0.44	0.47	0.5	0.52	0.55	0.57	0.6	0.62	0.65	0.67	0.69	0.72	0.74	0.76	0.78	0.81	0.83
	6 mm - 15.9 mm - 6 mm	0.71	0.8	0.88	0.95	1.01	1.07	1.13	1.19	1.24	1.29	1.34	1.38	1.43	1.47	1.51	1.55	1.59	1.63	1.67	1.7	1.74	1.77	1.8	1.84
	6 mm - 15.9 mm - 8 mm	0.56	0.63	0.7	0.77	0.83	0.89	0.94	0.99	1.04	1.09	1.13	1.18	1.22	1.26	1.3	1.34	1.38	1.41	1.45	1.48	1.52	1.55	1.58	1.62
	6 mm - 15.9 mm - (6 mm| 1.52mm PVB | 6 mm)	0.44	0.49	0.53	0.58	0.62	0.65	0.69	0.73	0.76	0.79	0.82	0.85	0.88	0.91	0.94	0.97	0.99	1.02	1.05	1.07	1.09	1.12	1.14	1.17
	6 mm - 15.9 mm - (6 mm| 1.52mm SGP | 6 mm)	0.23	0.26	0.3	0.33	0.36	0.39	0.41	0.44	0.47	0.5	0.52	0.55	0.57	0.6	0.62	0.65	0.67	0.69	0.72	0.74	0.76	0.78	0.81	0.83
Outboard - spacer- middle lite - spacer - inboard																								
Triple Pane	6 mm - 12.7 mm - 6 mm - 12.7 mm - 6 mm	0.55	0.62	0.68	0.74	0.8	0.85	0.9	0.95	0.99	1.03	1.07	1.11	1.15	1.19	1.22	1.26	1.29	1.32	1.35	1.38	1.41	1.44	1.47	1.5
	6 mm - 12.7 mm - 6 mm - 12.7 mm - 8 mm	0.46	0.53	0.59	0.65	0.7	0.75	0.8	0.84	0.89	0.93	0.97	1.01	1.05	1.08	1.12	1.15	1.19	1.22	1.25	1.28	1.31	1.35	1.37	1.4
	6 mm - 12.7 mm - 6 mm - 12.7 mm - 10 mm	0.36	0.42	0.47	0.53	0.57	0.62	0.66	0.71	0.75	0.79	0.82	0.86	0.9	0.93	0.96	1	1.03	1.06	1.09	1.12	1.15	1.18	1.2	1.23
	6 mm - 12.7 mm - 6 mm - 12.7 mm - (6 mm| 1.52mm PVB | 6 mm)	0.42	0.46	0.5	0.55	0.59	0.62	0.66	0.69	0.72	0.75	0.78	0.81	0.84	0.87	0.89	0.92	0.95	0.97	0.99	1.02	1.04	1.06	1.09	1.11
	6 mm - 12.7 mm - 6 mm - 12.7 mm - (6 mm| 1.52mm PVB | 6 mm)	0.22	0.25	0.28	0.31	0.33	0.36	0.39	0.41	0.44	0.46	0.49	0.51	0.54	0.56	0.58	0.6	0.63	0.65	0.67	0.69	0.71	0.73	0.76	0.78
	6 mm - 15.9 mm - 6 mm - 15.9 mm - 6 mm	0.55	0.62	0.68	0.74	0.8	0.85	0.9	0.95	0.99	1.03	1.07	1.11	1.15	1.19	1.22	1.26	1.29	1.32	1.35	1.38	1.41	1.44	1.47	1.5
	6 mm - 15.9 mm - 6 mm - 15.9 mm - 8 mm	0.46	0.53	0.59	0.65	0.7	0.75	0.8	0.84	0.89	0.93	0.97	1.01	1.05	1.08	1.12	1.15	1.19	1.22	1.25	1.28	1.31	1.35	1.37	1.4
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