



Basic Pressure Coefficient 1.3

Location	Basic Wind		Terrain Description	Terrain Category	Peak Louvre Pressure Variation at Screen Height				
	Speed (m/s)	Pressure (kPa)			3m (kPa)	5m (kPa)	10m (kPa)	15m (kPa)	20m (kPa)
● Kuala Lumpur, Malaysia ● Singapore ● Jakarta, Indonesia									
	35	0.74	open	TC2	0.79	0.79	0.96	1.05	1.11
			suburban	TC3	0.66	0.66	0.66	0.76	0.84
			urban	TC4	0.54	0.54	0.54	0.54	0.54
● Adelaide ● Sydney ● Hobart ● Canberra ● Melbourne ● Perth ● Bangkok, Thailand									
● Auckland, NZ ● Christchurch, NZ									
	39	0.91	open	TC2	0.98	0.98	1.19	1.31	1.38
			suburban	TC3	0.82	0.82	0.82	0.94	1.05
			urban	TC4	0.67	0.67	0.67	0.67	0.67
● Brisbane ● Wellington, NZ									
	45	1.22	open	TC2	1.31	1.31	1.58	1.74	1.84
			suburban	TC3	1.09	1.09	1.09	1.25	1.40
			urban	TC4	0.89	0.89	0.89	0.89	0.89
● Darwin ● Cairns									
	52	1.62	open	TC2	1.75	1.75	2.11	2.33	2.46
			suburban	TC3	1.45	1.45	1.45	1.67	1.86
			urban	TC4	1.19	1.19	1.19	1.19	1.19
● Hong Kong ● Macau									
	68	2.77	open	TC2	2.99	2.99	3.61	3.98	4.21
			suburban	TC3	2.48	2.48	2.48	2.86	3.19
			urban	TC4	2.03	2.03	2.03	2.03	2.03

NOTES:

The intention of this table and calculation procedure is to provide an estimate of wind pressures on an array of screens, based on a few simplifying assumptions.

- The basic pressure coefficient is intended to take into account the influence of the shape of the building on the pressure experienced by the screens. It is a conservative approximation and allows the pressures in the table to be applicable for the following cases.
 - Screens placed on any wall of a building.
 - Screens placed horizontally, away from the edge of a building.
- Screens positioned near building corners within a proximity of 0.2 x smallest building plan dimension will experience pressures up to 2 times the above tabulated pressures (*see diagram A on adjacent page 19*).
- The basic wind speed is a peak 3-second gust with a 50-year return period, measured at 10 metres height in a terrain category 2.
- The basic wind pressure is the freestream pressure at 10m in terrain category 2.
- Terrain category classifications are based on AS1170.2-2002.
- Wind speeds are based on data from AS1170.2-2002 and "Wind Loading on Structures" by J.D. Holmes.

**For free standing screens or screens located above 20 metres in height
DO NOT use this table - specialist façade engineering advice is required**

Examples of Wind Pressure Calculation

- Location is Melbourne, screen height is 15 metres in suburban terrain category (TC3)
From table above the typical screen peak design pressure = 0.94 kPa
Screens face-mounted and located around building corners
Building has a rectangular plan shape of dimension 20m x 50m (*see diagram A on adjacent page 19*)
Peak design pressure of 2 x 0.94 kPa = 1.88 kPa load to be used when selecting screen profiles from page 16
- Location is Darwin, screen height is 20 metres in open terrain category (TC2)
From table above, the typical screen peak design pressure = 2.46 kPa
Screens face-mounted and distanced from building corners a minimum of 0.2 x smallest building plan dimension
Peak design pressure = 2.46 kPa load to be used when selecting screen profiles from page 16

Hi-Light can provide definitive calculations for project specific designs.

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Patent applications are also pending in relation to the presentation of this data.

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