

$$P=q((GC_p)-(GC_{pi}))$$

$$q_z=47.3 \times 10^{-6} \cdot K_z K_{zt} K_d \cdot V^2 I_w$$

| | |
|---------------------------|--------|
| θ= | 35 |
| rise= | 13.61 |
| span= | 78 |
| he= | 13.5 |
| MRH= | 20.305 |
| L= | 78 |
| B= | 67.12 |
| Exposure= | 2 |
| Importance Factor= | 4 |
| Zone= | 2 |
| Enclosure Classification= | 3 |

Note:

For Exposure:

B=1

C=2

D=3

For Enclosure Classification:

Open Bldg=1

Partially Enclosed Bldg=2

Enclosed Bldg=3

| | |
|--|---------------|
| | input data |
| | interpolation |
| | note |

| | | | |
|--------------------|----------|-----------|---------|
| Kz= | 1.13 | 18 | |
| | 1.160733 | | |
| | 1.17 | 21 | |
| Kzt= | 1 | | |
| Kd | 0.85 | | |
| V= | 200 | | |
| Iw= | 1 | | |
| GC _{pi} = | 0.18 | (+/-) | |
| Ratio= | 0.174487 | | |
| q _z = | 1.866691 | | |
| Roof | Windward | Center | Leeward |
| C _p = | -0.9 | -0.874487 | -0.5 |
| Wall | Windward | Leeward | Side |
| C _p = | 0.8 | -0.46758 | -0.7 |

*Based from NSCP results are for both MWFRS/CC

*This Calculator is only applicable to elevated arched roof

Parallel to Ridge:

| | | | | | | |
|------|-----------|-----------|-----------|-----------|-----------|-----------|
| Roof | windward | | Center | | Leeward | |
| | + | - | + | - | + | - |
| p= | -1.764023 | -1.092014 | -1.723542 | -1.051534 | -1.129348 | -0.457339 |
| Wall | windward | | Leeward | | Side | |
| | + | - | + | - | + | - |
| p= | -0.336004 | 1.605355 | -1.077909 | -0.4059 | -1.446686 | -0.774677 |

Normal to Ridge:

| | | | | |
|------|----------|----------|---------|------|
| Roof | 0 to h/2 | h/2 to h | h to 2h | >2h |
| Cp= | -0.9 | -0.9 | -0.5 | -0.3 |
| Wall | Windward | Leeward | Side | |
| Cp= | 0.8 | -0.5 | -0.7 | |

| | | | | | | | | |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----|---|
| Roof | 0 to h/2 | | h/2 to h | | h to 2h | | >2h | |
| | + | - | + | - | + | - | + | - |
| p= | -1.764023 | -1.092014 | -1.723542 | -1.051534 | -1.129348 | -0.457339 | | |
| Wall | windward | | Leeward | | Side | | | |
| | + | - | + | - | + | - | | |
| p= | -0.336004 | 1.605355 | -1.077909 | -0.4059 | -1.446686 | -0.774677 | | |

| Height above Ground level, z (m) | Exposure (Note 1) | | | |
|--|-------------------|--------|--------|--------|
| | B | | C | D |
| | Case 1 | Case 2 | Case 3 | Case 4 |
| 4.5 | 0.7 | 0.57 | 0.85 | 1.03 |
| 6 | 0.7 | 0.62 | 0.9 | 1.08 |
| 7.5 | 0.7 | 0.66 | 0.94 | 1.12 |
| 9 | 0.7 | 0.7 | 0.98 | 1.16 |
| 12 | 0.76 | 0.76 | 1.04 | 1.22 |
| 15 | 0.81 | 0.81 | 1.09 | 1.27 |
| 18 | 0.85 | 0.85 | 1.13 | 1.31 |
| 21 | 0.89 | 0.89 | 1.17 | 1.34 |
| 24 | 0.93 | 0.93 | 1.21 | 1.38 |
| 27 | 0.96 | 0.96 | 1.24 | 1.4 |
| 30 | 0.99 | 0.99 | 1.26 | 1.43 |
| 36 | 1.04 | 1.04 | 1.31 | 1.48 |
| 42 | 1.09 | 1.09 | 1.36 | 1.52 |
| 48 | 1.13 | 1.13 | 1.39 | 1.55 |
| 54 | 1.17 | 1.17 | 1.43 | 1.58 |
| 60 | 1.2 | 1.2 | 1.46 | 1.61 |
| 75 | 1.28 | 1.28 | 1.53 | 1.68 |
| 90 | 1.35 | 1.35 | 1.59 | 1.73 |
| 105 | 1.41 | 1.41 | 1.64 | 1.78 |
| 120 | 1.47 | 1.47 | 1.69 | 1.82 |
| 135 | 1.52 | 1.52 | 1.73 | 1.86 |
| 150 | 1.56 | 1.56 | 1.77 | 1.89 |