

## Relatório

Observação: Os resultados aqui expostos devem ser avaliados por um profissional com experiência

VisualVentos <http://www.etools.upf.br>

Este software está registrado no INPI No. 00062090

### Dados Geométricos

$b = 27.00 \text{ m}$

$a = 60.00 \text{ m}$

$b1 = 2 * h$

$b1 = 2 * 9.00$

$b1 = 18.00 \text{ m}$

ou

$b1 = b/2$

$b1 = 27.00/2$

$b1 = 13.50 \text{ m}$

Adota-se o menor valor, portanto

$b1 = 13.50 \text{ m}$

$a1 = b/3$

$a1 = 27.00/3$

$a1 = 9.00 \text{ m}$

ou

$a1 = a/4$

$a1 = 60.00/4$

$a1 = 15.00 \text{ m}$

Adota-se o maior valor, porém  $a1 \leq 2 * h$

$2 * 9.00 = 18.00 \text{ m}$

Portanto

$a1 = 15.00 \text{ m}$

$a2 = (a/2) - a1$

$a2 = (60.00/2) - 15.00$

$a2 = 15.00 \text{ m}$

$h = 9.00 \text{ m}$

$h1 = 1.85 \text{ m}$

$\beta = 7.80^\circ$

$d = 6.00 \text{ m}$

### Área das aberturas

#### Fixas

Face A1 =  $0.00 \text{ m}^2$

Face A2 =  $0.00 \text{ m}^2$

Face A3 =  $0.00 \text{ m}^2$

Face B1 =  $0.00 \text{ m}^2$

Face B2 =  $0.00 \text{ m}^2$

Face B3 =  $0.00 \text{ m}^2$

Face C1 =  $8.00 \text{ m}^2$

Face C2 =  $8.00 \text{ m}^2$

Face D1 =  $8.00 \text{ m}^2$

Face D2 =  $8.00 \text{ m}^2$

#### Movéis

Face A1 =  $0.00 \text{ m}^2$

Face A2 =  $0.00 \text{ m}^2$

Face A3 =  $0.00 \text{ m}^2$

Face B1 =  $0.00 \text{ m}^2$

Face B2 =  $0.00 \text{ m}^2$

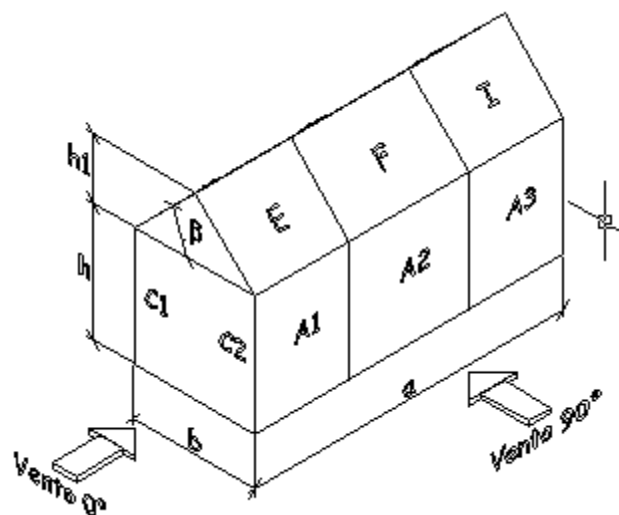
Face B3 =  $0.00 \text{ m}^2$

Face C1 =  $0.00 \text{ m}^2$

Face C2 =  $0.00 \text{ m}^2$

Face D1 =  $0.00 \text{ m}^2$

Face D2 =  $0.00 \text{ m}^2$



Velocidade básica do vento

$V_o = 30.00 \text{ m/s}$

Fator Topográfico (S1)

Terreno plano ou fracamente acidentado

$S1 = 1.00$

Fator de Rugosidade (S2)

Categoria II

Classe C

Parâmetros retirados da Tabela 2 da NBR6123/88 que relaciona Categoria e Classe

$b = 1.00$

$Fr = 0.95$

$p = 0.10$

$S2 = b * Fr * (z/10)^{\exp p}$

$S2 = 1.00 * 0.95 * (10.85/10)^{\exp 0.10}$

$S2 = 0.96$

Fator Estático (S3)

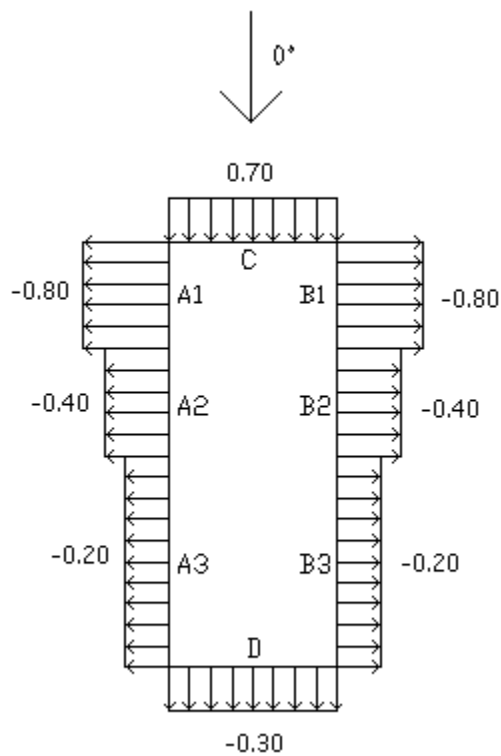
Grupo 1

$S3 = 1.00$

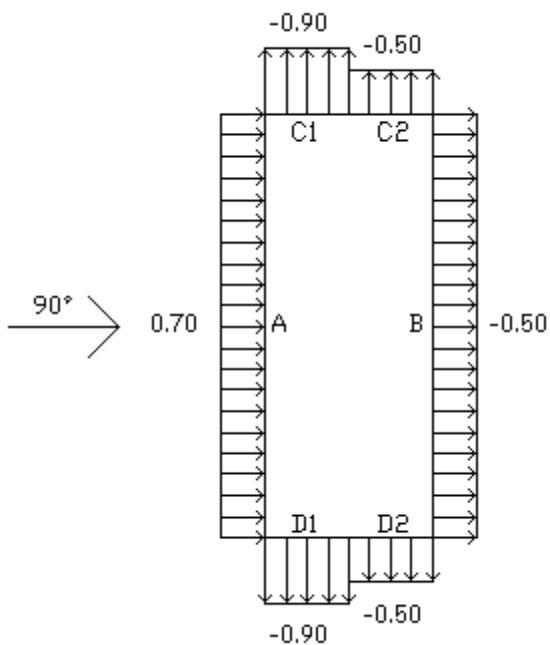
Coeficiente de pressão externa

Paredes

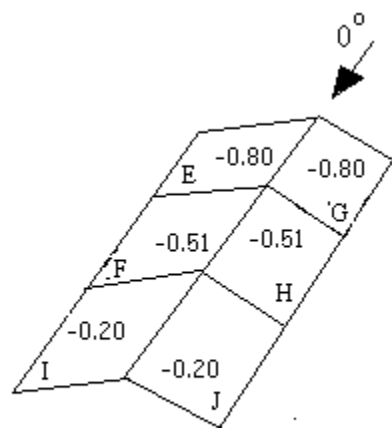
Vento  $0^\circ$



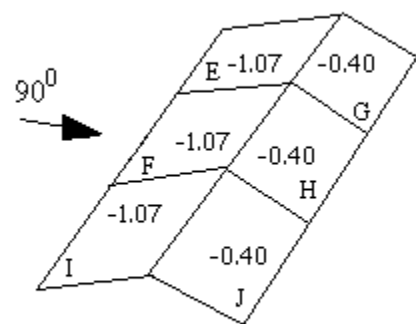
Vento  $90^\circ$



Telhado  
Vento  $0^\circ$



Vento  $90^\circ$



$C_{pe}$  médio = -1.00

Coeficiente de pressão interno

$C_{pi}$  1 = -0.30

$C_{pi}$  2 = 0.00

Velocidade Característica de Vento

$V_k = V_o \cdot S_1 \cdot S_2 \cdot S_3$

$V_k = 30.00 \cdot 1.00 \cdot 0.96 \cdot 1.00$

$V_k = 28.73 \text{ m/s}$

Pressão Dinâmica

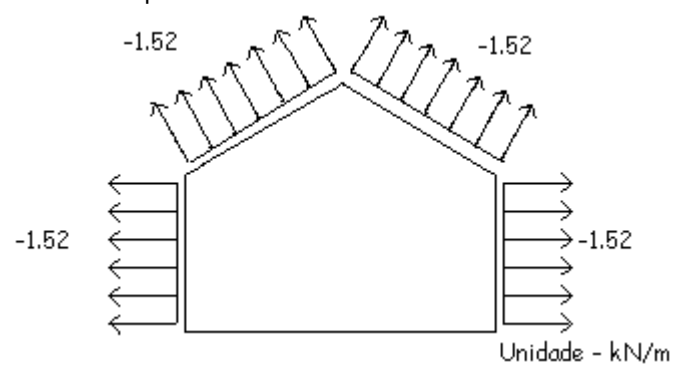
$q = 0.613 \cdot V_k^2$

$$q = 0,613 \cdot 28.73^2$$

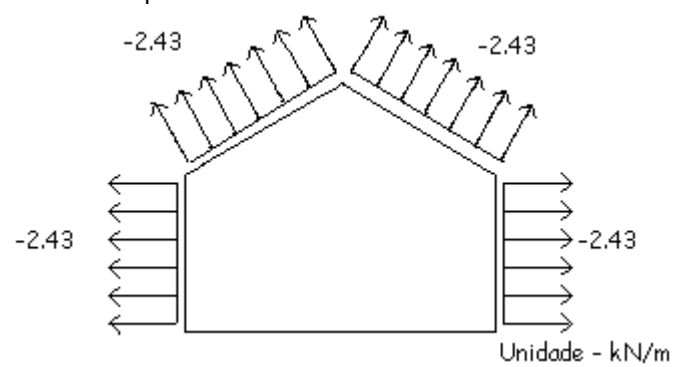
$$q = 0.51 \text{ kN/m}^2$$

# Esforços Resultantes

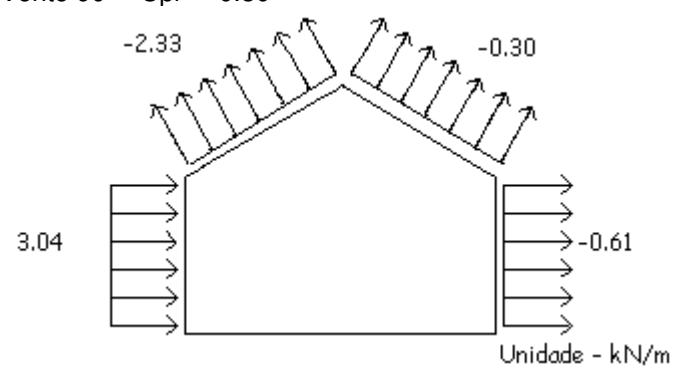
Vento 0° - Cpi = -0.30



Vento 0° - Cpi = 0.00



Vento 90° - Cpi = -0.30



Vento 90° - Cpi = 0.00

