

Extruded Aluminum Penthouse High Performance

Model: PMAB Mitered Corner, PLAB Post Corner

Model PMAB and PLAB

▼ Standard Specifications

Blades: 6063-T6 extruded aluminum with .081" (2.1mm) thickness. All units incorporate hidden mullions at 60" (1219mm) centers for blade support.

Roof: Fabricated at .050" (1.3mm) thickness 3003-H14 formed aluminum, roof is secured with sheet metal screws for ease in removal. Flat roofs are cross broken for adequate element run-off. Models with pitched roofs have a 1" in 12" or 3" in 12" (25.4mm in 305mm or 76mm in 305mm) pitch.

Internal Framing: 1-1/2" x 1-1/2" x 1/8" (38mm x 38mm) framing angles of 6063-T6 extruded aluminum on 48" (1219mm) maximum centers

Finish: all aluminum mill finish for low maintenance and resistance to corrosion

Screen: 3/4" x .051" flattened aluminum birdscreen

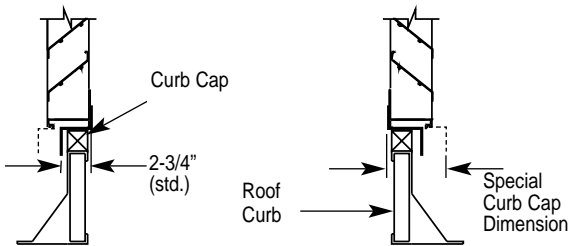
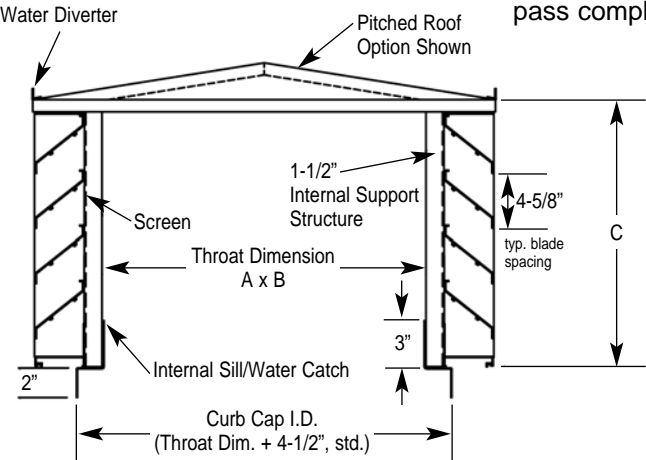
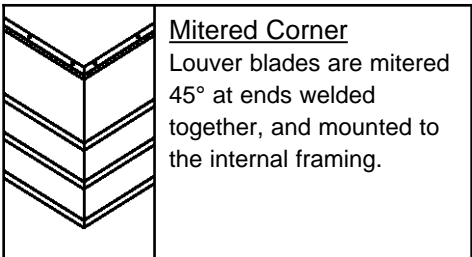
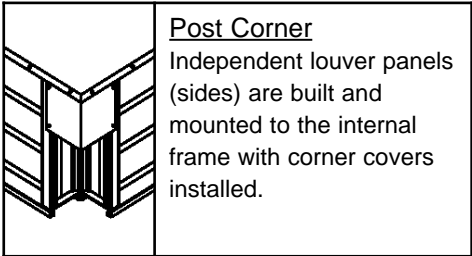
Sizing: Order size is actual throat dimensions. Throat is undercut 1/4" (6mm) in both "A" and "B" dimensions for installation allowance.

Minimum: 12"w x 12"l x 10"h (305mm x 305mm x 254mm)

Maximum: 72"w x 220"l x 80"h (1829mm x 5588mm x 2032mm).

Unlimited size with multiple section assembly.

Note: Louvered Penthouses are reasonably weather tight. However, they are not recommended for use where airborne water droplets from storms or high winds may damage the interior of the building. Provisions should always be made for potential wind driven rain or snow carry over because air can pass completely through a Louvered Penthouse.



Standard Curb Cap Installation

Model PMAB and PLAB

Free Area in Square Feet

| HEIGHT INCHES | WIDTH IN INCHES | | | | | | | | | | | | | | | | | | |
|------------------|-----------------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 | 78 | 84 | 90 | 96 | 102 | 108 | 114 | 120 |
| 12 | 0.19 | 0.31 | 0.43 | 0.54 | 0.66 | 0.78 | 0.89 | 1.01 | 1.13 | 1.24 | 1.36 | 1.48 | 1.59 | 1.71 | 1.83 | 1.94 | 2.06 | 2.18 | 2.29 |
| 18 | 0.50 | 0.80 | 1.10 | 1.41 | 1.71 | 2.01 | 2.31 | 2.62 | 2.92 | 3.22 | 3.53 | 3.83 | 4.13 | 4.43 | 4.74 | 5.04 | 5.34 | 5.65 | 5.95 |
| 24 | 0.77 | 1.23 | 1.70 | 2.16 | 2.63 | 3.09 | 3.56 | 4.02 | 4.49 | 4.96 | 5.42 | 5.89 | 6.35 | 6.82 | 7.28 | 7.75 | 8.21 | 8.68 | 9.14 |
| 30 | 0.96 | 1.54 | 2.13 | 2.71 | 3.30 | 3.88 | 4.46 | 5.05 | 5.63 | 6.22 | 6.80 | 7.38 | 7.97 | 8.55 | 9.13 | 9.72 | 10.30 | 10.89 | 11.47 |
| 36 | 1.15 | 1.85 | 2.55 | 3.25 | 3.96 | 4.66 | 5.36 | 6.06 | 6.76 | 7.46 | 8.16 | 8.86 | 9.56 | 10.26 | 10.96 | 11.66 | 12.36 | 13.06 | 13.76 |
| 42 | 1.43 | 2.29 | 3.16 | 4.02 | 4.89 | 5.76 | 6.62 | 7.49 | 8.36 | 9.22 | 10.09 | 10.95 | 11.82 | 12.69 | 13.55 | 14.42 | 15.29 | 16.15 | 17.02 |
| 48 | 1.61 | 2.59 | 3.57 | 4.55 | 5.53 | 6.51 | 7.49 | 8.47 | 9.45 | 10.43 | 11.41 | 12.39 | 13.37 | 14.35 | 15.33 | 16.31 | 17.29 | 18.27 | 19.25 |
| 54 | 1.92 | 3.09 | 4.26 | 5.42 | 6.59 | 7.76 | 8.93 | 10.10 | 11.26 | 12.43 | 13.60 | 14.77 | 15.93 | 17.10 | 18.27 | 19.44 | 20.61 | 21.77 | 22.94 |
| 60 | 2.11 | 3.40 | 4.68 | 5.97 | 7.25 | 8.54 | 9.82 | 11.11 | 12.39 | 13.67 | 14.96 | 16.24 | 17.53 | 18.81 | 20.10 | 21.38 | 22.67 | 23.95 | 25.23 |
| 66 | 2.35 | 3.78 | 5.21 | 6.64 | 8.07 | 9.50 | 10.93 | 12.36 | 13.79 | 15.22 | 16.65 | 18.08 | 19.51 | 20.94 | 22.37 | 23.80 | 25.23 | 26.66 | 28.09 |
| 72 | 2.81 | 4.52 | 6.23 | 7.94 | 9.65 | 11.36 | 13.07 | 14.78 | 16.49 | 18.20 | 19.90 | 21.61 | 23.32 | 25.03 | 26.74 | 28.45 | 30.16 | 31.87 | 33.58 |
| 78 | 2.88 | 4.63 | 6.39 | 8.14 | 9.89 | 11.64 | 13.39 | 15.14 | 16.90 | 18.65 | 20.40 | 22.15 | 23.90 | 25.65 | 27.40 | 29.16 | 30.91 | 32.66 | 34.41 |
| 84 | 3.07 | 4.94 | 6.81 | 8.68 | 10.55 | 12.42 | 14.28 | 16.15 | 18.02 | 19.89 | 21.76 | 23.63 | 25.49 | 27.36 | 29.23 | 31.10 | 32.97 | 34.84 | 36.70 |
| 90 | 3.28 | 5.27 | 7.27 | 9.26 | 11.25 | 13.25 | 15.24 | 17.23 | 19.23 | 21.22 | 23.21 | 25.21 | 27.20 | 29.19 | 31.18 | 33.18 | 35.17 | 37.16 | 39.16 |
| 96 | 3.55 | 5.70 | 7.86 | 10.02 | 12.17 | 14.33 | 16.48 | 18.64 | 20.80 | 22.95 | 25.11 | 27.26 | 29.42 | 31.57 | 33.73 | 35.89 | 38.04 | 40.20 | 42.35 |
| 102 | 3.82 | 6.13 | 8.45 | 10.77 | 13.09 | 15.41 | 17.73 | 20.05 | 22.36 | 24.68 | 27.00 | 29.32 | 31.64 | 33.96 | 36.28 | 38.59 | 40.91 | 43.23 | 45.55 |
| 108 | 3.96 | 6.37 | 8.78 | 11.19 | 13.60 | 16.01 | 18.42 | 20.82 | 23.23 | 25.64 | 28.05 | 30.46 | 32.87 | 35.28 | 37.68 | 40.09 | 42.50 | 44.91 | 47.32 |
| 114 | 4.24 | 6.81 | 9.38 | 11.96 | 14.53 | 17.10 | 19.68 | 22.25 | 24.82 | 27.40 | 29.97 | 32.54 | 35.12 | 37.69 | 40.26 | 42.84 | 45.41 | 47.98 | 50.56 |
| 120 | 4.28 | 6.89 | 9.49 | 12.09 | 14.69 | 17.30 | 19.90 | 22.50 | 25.10 | 27.71 | 30.31 | 32.91 | 35.51 | 38.12 | 40.72 | 43.32 | 45.92 | 48.53 | 51.13 |

PLAB and PMAB Selection and Examples

Example 1:

Airflow given as 10,000 cfm – select four louver sides

- A. 10,000 cfm ÷ 4 louver sides = 2,500 cfm per side
- B. 2,500 cfm ÷ 812 fpm = 3.08 ft² (F.A.) per side
- C. Select louver from the above free area chart

42" w x 24" h = 3.09 ft² (F.A.)
 3.09 ft² x 4 sides = 12.36 ft² total

Example 2:

To select "rectangular" shape in lieu of square

- A. Simply break down 12.36 ft²
- 4 + 4 + 2 + 2 = 12 ft²
- B. Select louver from above free area chart

2 ft² = 42" x 18"
 4 ft² = 82" x 18"

Penthouse size 82" w x 42" l x 18" h

Model PMAB and PLAB

Performance Data (CFM)

| Length + Width (A + B) | Height (Tiers) | Free Area Velocity / Pressure Drop - Intake (fpm/in. of w.g.) | | | | | | | | |
|------------------------|----------------|---|----------|----------|----------|-----------|----------|----------|----------|-----------|
| | | 200/.050 | 300/.065 | 400/.080 | 500/.095 | *600/.120 | 700/.150 | 800/.170 | 900/.210 | 1000/.270 |
| 24 | 16" (3) | 400 | 600 | 800 | 1,000 | 1,225 | 1,425 | 1,625 | 1,825 | 2,025 |
| | 20-1/2" (4) | 625 | 950 | 1,275 | 1,600 | 1,900 | 2,225 | 2,560 | 2,875 | 3,200 |
| 36 | 16" (3) | 600 | 900 | 1,200 | 1,520 | 1,825 | 2,125 | 2,425 | 2,725 | 3,025 |
| | 20-1/2" (4) | 925 | 1,375 | 1,850 | 2,300 | 2,775 | 3,225 | 3,700 | 4,175 | 4,625 |
| 48 | 16" (3) | 775 | 1,175 | 1,575 | 1,975 | 2,375 | 2,750 | 3,150 | 3,550 | 3,950 |
| | 20-1/2" (4) | 1,200 | 1,825 | 2,425 | 3,050 | 3,650 | 4,275 | 4,875 | 5,500 | 6,100 |
| | 25-1/4" (5) | 1,600 | 2,400 | 3,225 | 4,025 | 4,825 | 5,650 | 6,450 | 7,250 | 8,075 |
| 60 | 16" (3) | 975 | 1,475 | 1,975 | 2,475 | 2,975 | 3,450 | 3,950 | 4,450 | 4,950 |
| | 20-1/2" (4) | 1,500 | 2,275 | 3,025 | 3,800 | 4,550 | 5,300 | 6,075 | 6,825 | 7,600 |
| | 25-1/4" (5) | 2,000 | 3,000 | 4,000 | 5,000 | 6,000 | 7,000 | 8,000 | 9,000 | 10,000 |
| | 29-3/4" (6) | 2,375 | 3,575 | 4,750 | 5,950 | 7,150 | 8,325 | 9,525 | 10,725 | 11,900 |
| | 34-1/2" (7) | 2,725 | 4,100 | 5,475 | 6,850 | 8,225 | 9,600 | 10,975 | 12,325 | 13,700 |
| 72 | 20-1/2" (4) | 1,800 | 2,700 | 3,625 | 4,525 | 5,425 | 6,350 | 7,250 | 8,150 | 9,075 |
| | 25-1/4" (5) | 2,400 | 3,600 | 4,800 | 6,000 | 7,200 | 8,400 | 9,600 | 10,800 | 12,000 |
| | 29-3/4" (6) | 2,825 | 4,250 | 5,700 | 7,100 | 8,525 | 9,950 | 11,350 | 12,800 | 14,200 |
| | 34-1/2" (7) | 3,275 | 4,925 | 6,575 | 8,225 | 9,875 | 11,525 | 13,175 | 14,825 | 16,475 |
| | 39" (8) | 3,825 | 5,750 | 7,700 | 9,600 | 11,525 | 13,450 | 15,375 | 17,300 | 19,225 |
| 84 | 25-1/4" (5) | 2,775 | 4,175 | 5,575 | 6,975 | 8,375 | 9,750 | 11,150 | 12,550 | 13,950 |
| | 29-3/4" (6) | 3,300 | 4,950 | 6,600 | 8,250 | 9,900 | 11,550 | 13,200 | 14,850 | 16,500 |
| | 34-1/2" (7) | 3,828 | 5,725 | 7,650 | 9,575 | 11,500 | 13,400 | 15,325 | 17,225 | 19,150 |
| | 39" (8) | 4,475 | 6,700 | 8,950 | 11,200 | 13,425 | 15,675 | 17,900 | 20,150 | 22,400 |
| | 43-5/8" (9) | 5,125 | 7,675 | 10,250 | 12,800 | 15,375 | 17,925 | 20,500 | 23,075 | 25,625 |
| 96 | 25-1/4" (5) | 3,175 | 4,775 | 6,350 | 7,950 | 9,550 | 11,100 | 12,725 | 14,300 | 15,900 |
| | 29-3/4" (6) | 3,750 | 5,650 | 7,525 | 9,400 | 11,300 | 13,175 | 15,050 | 16,950 | 18,000 |
| | 34-1/2" (7) | 4,350 | 6,550 | 8,725 | 10,900 | 13,100 | 15,275 | 17,450 | 19,650 | 21,800 |
| | 39" (8) | 5,100 | 7,650 | 10,200 | 12,750 | 15,300 | 17,850 | 20,400 | 22,950 | 25,500 |
| | 43-5/8" (9) | 5,825 | 8,750 | 11,675 | 14,600 | 17,500 | 20,425 | 23,350 | 26,275 | 29,200 |
| | 48-3/8" (10) | 6,425 | 9,650 | 12,875 | 16,100 | 19,300 | 22,550 | 25,775 | 29,000 | 32,200 |
| 120 | 25-1/4" (5) | 3,950 | 5,950 | 7,925 | 9,900 | 11,900 | 13,875 | 15,850 | 17,850 | 19,800 |
| | 29-3/4" (6) | 4,700 | 7,025 | 9,375 | 11,725 | 14,075 | 16,425 | 18,775 | 21,100 | 23,475 |
| | 34-1/2" (7) | 5,425 | 8,150 | 10,875 | 13,600 | 16,300 | 19,000 | 21,750 | 24,450 | 27,200 |
| | 39" (8) | 6,350 | 9,525 | 12,700 | 15,900 | 19,075 | 22,250 | 25,400 | 28,600 | 31,800 |
| | 43-5/8" (9) | 7,275 | 10,900 | 14,550 | 18,200 | 21,825 | 25,475 | 29,100 | 32,750 | 36,400 |
| | 48-3/8" (10) | 8,025 | 12,025 | 16,050 | 20,075 | 24,075 | 28,100 | 32,100 | 36,100 | 40,150 |

*Maximum recommended free area intake velocity.

See catalog product page for construction details.

Performance Caution: Wind driven rain conditions could cause some water to penetrate through the louver blades. Louvered penthouses are reasonably weather tight. However, they are not recommended for use where airborne water droplets from storms or high winds may damage the interior of the building. Provisions should always be made for potential wind driven rain or snow carry over because air can pass completely through a louvered penthouse.

Model PMAB and PLAB

Performance Data (CFM)

| Length + Width (A + B) | Height (Tiers) | Free Area Velocity / Pressure Drop - Intake (fpm/in. of w.g.) | | | | | | | | |
|------------------------|----------------|---|----------|----------|----------|-----------|----------|----------|----------|-----------|
| | | 200/.050 | 300/.065 | 400/.080 | 500/.095 | *600/.120 | 700/.150 | 800/.170 | 900/.210 | 1000/.270 |
| 144 | 29-3/4" (6) | 5,600 | 8,425 | 11,225 | 14,000 | 16,825 | 19,650 | 22,450 | 25,250 | 28,000 |
| | 34-1/2" (7) | 6,500 | 9,750 | 13,000 | 16,275 | 19,525 | 22,775 | 26,000 | 29,300 | 32,500 |
| | 39" (8) | 7,600 | 11,400 | 15,200 | 19,000 | 22,800 | 26,600 | 30,400 | 34,200 | 38,000 |
| | 43-5/8" (9) | 8,700 | 13,050 | 17,400 | 21,775 | 26,100 | 30,475 | 34,825 | 39,200 | 43,500 |
| | 48-3/8" (10) | 9,600 | 14,400 | 19,200 | 24,000 | 28,825 | 33,650 | 38,450 | 43,250 | 48,000 |
| | 53" (11) | 11,000 | 16,550 | 22,000 | 27,600 | 33,100 | 38,600 | 44,100 | 49,675 | 55,200 |
| 192 | 57-1/2" (12) | 12,000 | 18,000 | 24,000 | 30,000 | 36,000 | 42,000 | 48,025 | 54,025 | 60,000 |
| | 39" (8) | 10,100 | 15,175 | 20,225 | 25,275 | 30,350 | 35,375 | 40,400 | 45,500 | 50,500 |
| | 43-5/8" (9) | 11,575 | 17,375 | 23,150 | 28,950 | 34,750 | 40,550 | 46,325 | 52,125 | 57,900 |
| | 48-3/8" (10) | 12,800 | 19,200 | 25,600 | 32,000 | 38,400 | 44,800 | 51,200 | 57,600 | 64,000 |
| | 53" (11) | 14,650 | 22,000 | 29,300 | 36,600 | 44,000 | 51,300 | 58,650 | 66,000 | 73,600 |
| | 57-1/2" (12) | 15,700 | 23,600 | 31,400 | 39,300 | 47,200 | 55,000 | 62,900 | 70,800 | 78,600 |
| 216 | 62-1/4" (13) | 17,250 | 25,900 | 34,500 | 43,100 | 51,800 | 60,400 | 69,000 | 77,700 | 86,300 |
| | 66-3/4" (14) | 18,800 | 28,300 | 37,700 | 47,200 | 56,600 | 66,000 | 75,500 | 84,900 | 94,400 |
| | 39" (8) | 11,350 | 17,050 | 22,700 | 28,400 | 34,100 | 39,750 | 45,400 | 51,100 | 56,800 |
| | 43-5/8" (9) | 13,000 | 19,500 | 26,000 | 32,550 | 39,000 | 45,550 | 52,075 | 58,575 | 65,100 |
| | 48-3/8" (10) | 14,360 | 21,500 | 28,700 | 35,900 | 43,000 | 50,250 | 57,400 | 64,600 | 71,800 |
| | 53" (11) | 16,475 | 24,700 | 32,975 | 41,200 | 49,475 | 57,700 | 65,975 | 74,200 | 82,475 |
| 240 | 57-1/2" (12) | 17,900 | 26,900 | 35,875 | 44,850 | 53,800 | 62,775 | 71,750 | 80,700 | 89,700 |
| | 62-1/4" (13) | 19,400 | 29,000 | 38,800 | 48,500 | 58,200 | 67,900 | 77,600 | 87,300 | 97,000 |
| | 66-3/4" (14) | 21,200 | 31,875 | 42,500 | 53,150 | 63,775 | 74,400 | 85,000 | 95,675 | 106,300 |
| | 74-1/2" (15) | 25,000 | 37,575 | 50,100 | 62,600 | 75,150 | 87,700 | 100,200 | 112,750 | 125,200 |
| | 48-3/8" (10) | 15,500 | 23,300 | 31,075 | 38,850 | 46,625 | 54,400 | 62,175 | 69,950 | 77,700 |
| | 53" (11) | 17,850 | 26,775 | 35,700 | 44,625 | 53,550 | 62,500 | 71,400 | 80,350 | 89,250 |
| 240 | 57-1/2" (12) | 19,400 | 29,100 | 38,800 | 48,500 | 58,250 | 67,950 | 77,675 | 87,375 | 97,100 |
| | 62-1/4" (13) | 21,000 | 31,500 | 42,000 | 52,500 | 63,000 | 73,500 | 84,000 | 94,500 | 105,000 |
| | 66-3/4" (14) | 23,000 | 34,500 | 46,000 | 57,500 | 69,000 | 80,500 | 92,000 | 103,500 | 115,100 |
| | 74-1/2" (15) | 27,100 | 40,675 | 54,250 | 67,800 | 81,300 | 94,900 | 108,500 | 122,000 | 135,650 |

*Maximum recommended free area intake velocity.

See catalog product page for construction details.

Performance Caution: Wind driven rain conditions could cause some water to penetrate through the louver blades. Louvered penthouses are reasonably weather tight. However, they are not recommended for use where airborne water droplets from storms or high winds may damage the interior of the building. Provisions should always be made for potential wind driven rain or snow carry over because air can pass completely through a louvered penthouse.

PLAB and PMAB Example

Required cfm: 8,200 (intake), .10" w.g. (max. pressure drop), no taller than 36".

Length + Width: Select 84

Throat can be 42 x 42 (A + B) or a rectangular size such as 48 x 36 (A + B).

Select 6 tiers (29-3/4" tall) will allow up to 8,250 cfm at .095" w.g. pressure drop.