



# **Eastern**

**ARCHITECTURAL SYSTEMS**

**ALUMINUM AND VINYL**

**IMPACT WINDOWS AND DOORS**

Subject: Calculation of Masonry Opening

The following are instructions on how to calculate the masonry opening for EAS windows and doors.

1. Current 143 Vinyl Window Line and Aluminum window line:
  - a. Identify the Tip to Tip size of the windows ordered.
  - b. Subtract 1/2" from each side for the flange of the window, 1" total from both height and width to get to the buck size of the window.
  - c. Identify the substrate being used, 1X buck, 2X buck or strait to masonry. Add the buck thickness to the window buck size. Add 3/4" to each side for 1X buck. Add 1 1/2" to each side for 2X buck.
  - d. Identify the shim space to be allowed for installation. 1/4" is maximum allowed per side per EAS product approvals. Add the shim space to each side to the measurement from above.
  - e. The finished dimension is the masonry opening for the window.

Example calculation: Window Tip to Tip size = 36" x 60"

- Subtract 1/2" for flange from each side =  $36'' - 1'' = 35''$ ,  $60'' - 1'' = 59''$  Window buck size is 35" x 59".
- Substrate to be used is 1X buck. Add 3/4" to each side, 1 1/2" total to height and width:  $35'' + 1\ 1/2'' = 36\ 1/2''$ .  $59'' + 1\ 1/2'' = 60\ 1/2''$ . New dimension is 36 1/2" x 60 1/2".
- 1/4" maximum shim space per side will be used. Add 1/4" to each side. Total 1/2" to height and width.  $36\ 1/2'' + 1/2'' = 37''$ .  $60\ 1/2'' + 1/2'' = 61''$ .
- Masonry Opening for a 36" x 60" Tip to Tip Vinyl Window = 37" x 61"

2. Current 176 Vinyl Window Line:
  - a. Identify the Tip to Tip size of the windows ordered.
  - b. Subtract 5/8" from each side for the flange of the window, 1-1/4" total from both height and width to get to the buck size of the window.
  - c. Identify the substrate being used, 1X buck, 2X buck or strait to masonry. Add the buck thickness to the window buck size. Add 3/4" to each side for 1X buck. Add 1 1/2" to each side for 2X buck.
  - d. Identify the shim space to be allowed for installation. 1/4" is maximum allowed per side per EAS product approvals. Add the shim space to each side to the measurement from above.
  - e. The finished dimension is the masonry opening for the window.



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Example calculation: Window Tip to Tip size = 36" x 60"

- Subtract 5/8" for flange from each side =  $36" - 1-1/4" = 34-3/4"$ ,  $60" - 1.25" = 58.75"$  Window buck size is  $34-3/4" \times 58-3/4"$ .
- Substrate to be used is 1X buck. Add 3/4" to each side, 1 1/2" total to height and width:  $34-3/4" + 1 1/2" = 36-1/4"$ .  $58-3/4" + 1 1/2" = 60-1/4"$ . New dimension is  $36 1/4" \times 60 1/4"$ .
- 1/4" maximum shim space per side will be used. Add 1/4" to each side. Total 1/2" to height and width.  $36 1/4" + 1/2" = 36-3/4"$ .  $60 1/4" + 1/2" = 60-3/4"$ .
- Masonry Opening for a 36" x 60" Tip to Tip Vinyl 176 Window =  $36-3/4" \times 60-3/4"$

3. All Vinyl and Aluminum Doors:

- Identify overall frame size. If ordering a 96" x 96" unit the overall frame size/buck size is 96" x 96".
- Identify the substrate being used, 1X buck, 2X buck or strait to masonry. Add the buck thickness to the door overall size/buck size at jambs and head. Add 3/4" for 1X buck. Add 1 1/2" for 2X buck. At the sill add 1/8" to allow leveling of sill.
- Identify the shim space to be allowed for installation. 1/4" is maximum allowed per side per EAS product approvals. Add the shim space to the jamb and head dimension from above.
- The finished dimension is the masonry opening for the door.

Example calculation: Door Overall Frame Size/Buck Size = 96" x 96"

- Substrate to be used is 1X buck. Add 3/4" to each jamb, 1 1/2" total to width:  $96" + 1 1/2" = 97 1/2"$ . Add 3/4" to head,  $96" + 3/4" = 96 3/4"$ . New dimension is
- New dimension is  $97 1/2" \times 96 3/4"$ .
- 1/4" maximum shim space per side will be used. Add 1/4" to each jamb. Total 1/2" to width.  $97 1/2" + 1/2" = 98"$ . Add 1/4" to head and 1/8" to sill for height dimension =  $96 3/4" + 1/4" + 1/8" = 97 1/8"$ .
- Masonry Opening for a 96" x 96" Overall Frame Size Door =  $98" \times 97 1/8"$

If you still have questions please feel free to contact Tim Hoard, Manager of Engineering at EAS at 1-800-423-2204 or at [thoard@easternmetal.com](mailto:thoard@easternmetal.com).