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Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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**Architects -** These concepts have been expanded and modified to afford you design freedom. Please contact your Kawneer representative for further assistance.

The extrusions and window types illustrated in this catalog are standard products for Kawneer.

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LAWS AND BUILDING AND SAFETY CODES GOVERNING THE DESIGN AND USE OF GLAZED ENTRANCE, WINDOW, AND CURTAIN WALL PRODUCTS VARY WIDELY. KAWNEER DOES NOT CONTROL THE SELECTION OF PRODUCT CONFIGURATIONS, OPERATING HARDWARE, OR GLAZING MATERIALS, AND ASSUMES NO RESPONSIBILITY THEREFOR.

Metric (SI) conversion figures are included throughout these details for reference. Numbers in parentheses ( ) are millimeters unless otherwise noted.

The following metric (SI) units are found in these details:

m - meter

cm - centimeter

mm - millimeter

s - second

Pa - pascal

MPa - megapascal

Kawneer reserves the right to change configurations without prior notice when deemed necessary for product improvement.



**FEATURES** E.C. 97911-32

- Full range of projected open-in and open-out vents and hinged casements.
- 14.6 mm ISOPORT ® glass-reinforced nylon 6/6 thermal break provides:
  - Improved condensation resistance and thermal transmittance performance capability.
  - Rigid profile with composite structural performance.
  - Exterior / interior finish options.
- Meets or exceeds the highest performance levels of CSA standard CAN/CSA-A440 windows.
- Sash features mitred and clip, adhesive, stake joinery to provide rigid and weather tight corners.
- Operating sash uses tubular extrusions.
- Factory fabricated and assembled.
- Optional full rain screen capability.
- Accommodates 25 mm sealed glazing units.
- Glass installed and replaced from interior.
- Exterior pre-shim butyl glazing tapes.
- Interior EPDM rubber glazing gaskets.
- Lock-in glass stop.
- Optional insect screens.

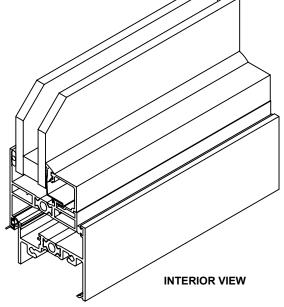


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E.C. 97911-32 PICTORIAL VIEWS

# PROJECTED VENTS CASEMENTS TOP PROJECTED OPEN-OUT (TPO) BOTTOM PROJECTED OPEN-IN (BPI) SIDE HINGED OPEN-OUT (SHO) SIDE HINGED OPEN-IN (SHI)



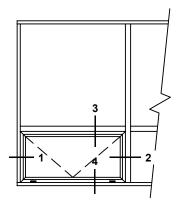
# PERIMETER FRAME SECTIONS



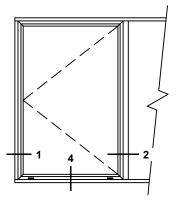


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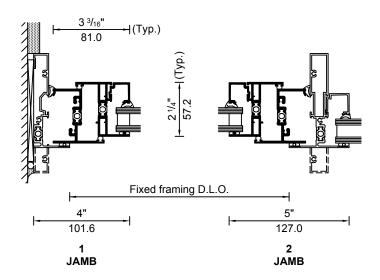
# SCALE 1/4 FULL SIZE

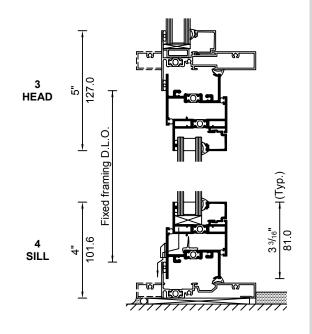


TYPE 801 BOTTOM PROJECTED OPEN-IN (BPI) VENTILATOR



TYPE 813 R.H. SHOWN TYPE 807 L.H. OPPOSITE SIDE HINGED OPEN-IN (SHI) CASEMENT

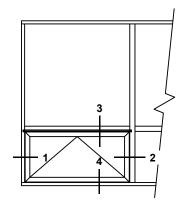




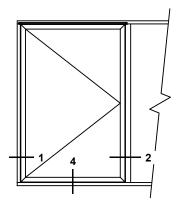
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**DETAILS OPEN-OUT** 

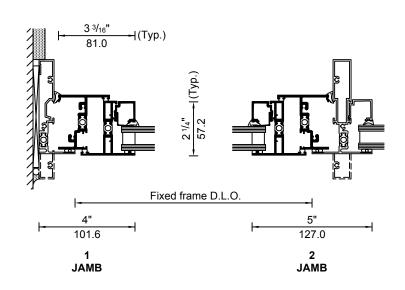
# SCALE 1/4 FULL SIZE

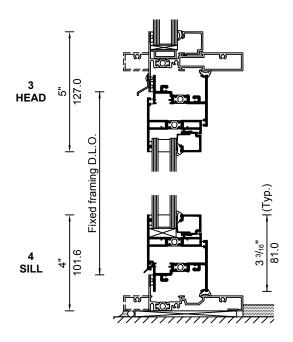


TYPE 802
TOP PROJECTED
OPEN-OUT (TPO)
VENTILATOR



TYPE 814 R.H. SHOWN TYPE 808 L.H. OPPOSITE SIDE HINGED OPEN-OUT (SHO) CASEMENT





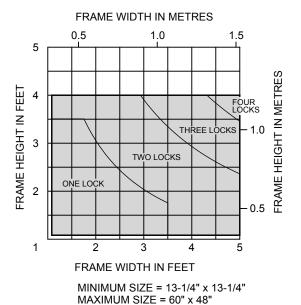


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# **LIMITATION CHARTS**

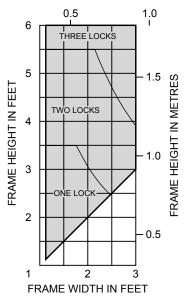
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# **BPI VENTILATOR SIZE CHART**



# SHI/SHO CASEMENT SIZE CHART

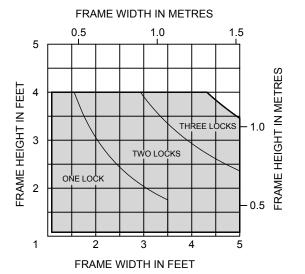
FRAME WIDTH IN METRES



MINIMUM SIZE = 13-1/4" x 13-1/4" MAXIMUM SIZE = 36" x 72"

Note: All SHO casements with roto operators, MINIMUM SIZE = 16-3/4" x 16-3/4"

# TPO VENTILATOR SIZE CHART

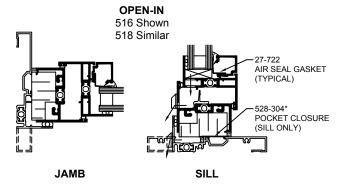


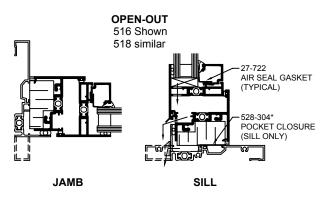
MINIMUM SIZE = 13-1/4" x 13-1/4" MAXIMUM SIZE = See above.

Note: All TPO vents with pivot shoe operators are supplied with (2) claw handles. MINIMUM SIZE = 20-5/8" x 19"

For vents 21" to 31" wide - max. opening = 1.75" For vents 32" to 60" wide - max. opening = 7.25"

# **RAIN SCREEN WINDOW**





\*Note: Use 528-304 pocket filler and full perimeter wet seal at interior when rain screen vent frame installation is required.



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# THERMAL TRANSMITTANCE

For some regions and projects there may be minimum energy efficiency requirements for the building envelope, and its components, including windows. The shading coefficient (SC) and the thermal transmittance (U - value) of the window is then required to determine whether the building design complies with the specified energy requirements. Shading coefficient depends on the glass selected and should be obtained from the glass supplier. The U - value of the window varies with the type of glass and sealed unit edge construction, the window frame, and the relative areas of these components.

The window thermal transmittance values (U - values) shown in the chart below are based on CSA - A440.2 "Energy Performance Evaluation of Windows and Sliding Glass Doors". U - values of the center of glass, edge of glass and frame areas were computed using the VISION and FRAME thermal simulation programs. Overall window U - values were calculated using the following relationship:

$$U_W = (U_C A_C + U_e A_e + U_f A_f)/A_W$$

where

U<sub>w</sub> = U-value of complete window product

U<sub>C</sub> = calculated center of glass U-value

Ue = calculated edge of glass U-value

Uf = calculated frame U-value

A<sub>C</sub> = center of glass area

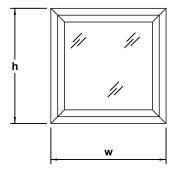
Ae = edge of glass area

 $A_f$  = frame area

A w = total window area

# OVERALL WINDOW U-VALUE (Uw)

For window configurations as shown with height (h) equal to width (w).



# **SEALED UNIT GLAZING TYPE**

A = 6mm clear / 1/2" air / 6mm clear / metal spacer

B = 6mm clear  $/ \frac{1}{2}$ " air / 6mm low-e<sup>1</sup> / metal spacer

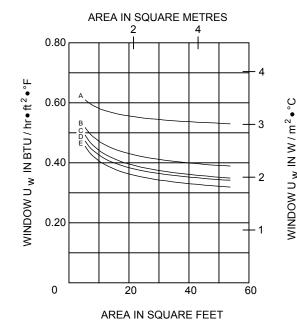
C = 6mm clear  $/ \frac{1}{2}$ " argon / 6mm low-e<sup>1</sup> / metal spacer

D = 6mm clear  $/ \frac{1}{2}$ " argon / 6mm low-e<sup>1</sup> / Helima thermally broken spacer

E = 6mm clear /  $\frac{1}{2}$ " argon / 6mm low-e<sup>2</sup> / Helima thermally broken spacer

1 - low-e coating emittance = 0.10

2 - low-e coating emittance = 0.03



NOTES: THE ABOVE SEALED UNIT GLAZING OPTIONS ARE PRESENTED FOR THE PURPOSES OF ILLUSTRATING THERMAL PERFORMANCE CAPABILITIES.

FOR WINDOWS WITH HEIGHT NOT EQUAL TO WIDTH, WHEN ADDING INTERMEDIATE VERTICALS OR HORIZONTALS, OR DIFFERENT GLASS INFILL, THE OVERALL WINDOW U - VALUE MAY VARY.

THE SPECIFIER SHOULD SELECT GLASS TO MEET THE PERFORMANCE REQUIREMENTS OF THE PROJECT.



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