

TPI's CUSTOM MANUFACTURED WINDOWS

The manufacture of high quality custom windows requires precision and diligence. Custom manufactured aluminum windows consist of specially designed extruded aluminum framed around various glazings. Each window style employs unique aluminum shapes designed for the intended function of the finished product, whether a fixed window, a sliding window, or a hinged egress window. The aluminum extrusion is formed with specialized machines designed for that purpose, and every bend made requires individual tooling called bending blocks. Each shape of aluminum extrusion requires tooling dedicated to its form and size of bend.

Additional machines and tooling are required to cut, notch, miter, and punch the window components to assure all window parts assemble into a finished product that is functional, durable, and aesthetically pleasing.

Transportation Products, Inc. commitment to tooling and machinery distinguishes TPI as the high quality, high volume window manufacturer. TPI's in-house capabilities to produce a majority of this tooling, assures you of consistent high quality windows and rapid response to your special requirements.

GLAZING - THE BASICS

TPI offers tempered glass, laminated glass, polycarbonates, and acrylics for glazing in our windows. Each type is offered in various tints and thicknesses. Available glazings for particular window styles are noted on the window style data sheet in this catalog.

Tempered Glass (safety glass) is a very popular glazing offering flexibility and strength. It provides flexibility in window design as it can be used in both framed and unframed window models, and allows for holes to be placed in the glass itself, often used for mounting latches and hardware. Tempered glass is available in various degrees of edge treatment from seamed to polished. Tempered glass is approximately four times stronger than laminated glass, and will withstand tremendous force of blunt objects to its surface. However, when its surface tension is penetrated (i.e. by a pointed object), the glass, by design, breaks into many small pieces minimizing the possibility of injury. Common usage for tempered glass would be in the side and rear windows of your automobile. The tempered glass used in TPI windows meets all applicable Federal Motor Vehicle Safety Standards and is also available to meet applicable European Standards sometimes required for export. Tempered glass used by TPI meets or exceeds the requirements of FMVSS 205 and is labeled by the glass manufacturer as required by the standard. Tempered glass used by TPI will carry the appropriate labeling of AS-2 (for windows with light transmittance of 73% and above) or AS-3 (for windows with light transmittance below 73%).

Laminated Glass is layered glass also characterized as safety glass. When it breaks, the glass remains attached to the laminate layer. Laminated glass is used in the windshield of your automobile. Laminated glass used in TPI windows meets all applicable FMVSS requirements. Laminated glass is available only in framed window models as specified on the data sheets. Laminated Glass used by TPI meets or exceeds the requirements of FMVSS 205 and is labeled by the glass manufacturer as required by the standard. Laminated glass used by TPI carries the appropriate marking of AS-1 (for windows with a .030 thick laminate layer and light transmittance of 73% or above), AS-2 (for windows with a .015 thick laminate layer and light transmittance of 73% or above), or AS-3 (for windows with a .015 thick laminate layer and light transmittance below 73%).

Acrylics- High strength plastic commonly referred to with the tradename Plexiglas®

Polycarbonates- High strength plastic commonly referred to with the tradename Lexan®

EXTRUDED ALUMINUM - THE BASICS

Extruded aluminum, used for framing TPI windows, is characterized with a high strength to weight ratio making it ideal for the manufacture of windows. Extruded aluminum is available in various tempers, from extremely rigid to very pliable. TPI uses various degrees of tempering for the particular designed purpose of each piece of extrusion. TPI warehouses over 200 shapes of aluminum extrusion in a variety of finishes. While it is not practical to warehouse each shape in every finish, available finishes for each window model are specified on the data sheets in this catalog.

GLOSSARY OF TERMS

Acrylics: Plexiglas® (as used in this catalog)

Aluminum Extrusion: Aluminum shapes used for the Window Frames and Parts.

Anodized: Finish coating on the Aluminum Extrusion.

Bending Blocks: Tooling used in machines designed to form the Aluminum Extrusion.

Continuous Radius: Large radius (bend) extending an entire side of a window.

Corner Radius: The bend at each corner of the window allowing a single piece frame.

Double Slider: Window with two sections movable.

Fixed Glass: Stationary

Flex Black Paint: Durable Finish coat on Aluminum Extrusion formulated to accept bending.

FMVSS: Federal Motor Vehicle Safety Standards

Framed Window: See Page A2

Full Egress: Entire window opens for emergency escape.

Glazing: The glass or other "transparent" material of the window.

Glazing Rubber: The gasket used to install a Rubber Mount window.

H : The Horizontal Dimension of the Window

HB: The Horizontal Dimension at the bottom of the Window. (Required on sloped windows)

HT: The Horizontal Dimension at the top of the Window. (Required on sloped windows)

Laminated Glass: Layered safety glass used in framed windows.

Mitered Corners: Square corners generally made by joining two 45 degree angle cuts.

Opening for Window: The cutout or other opening in the vehicle wall.

Partial Egress: Lower Section only opens for emergency escape.

Polycarbonates: Lexan® (as used in this catalog)

R: Radius of Corner

Single Slider: Window with one section movable.

Stationary Glass: Fixed Glass- non movable

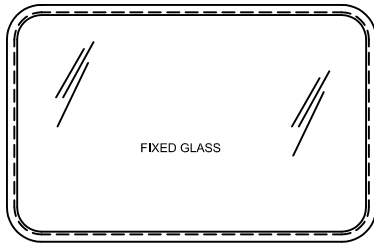
Tempered Glass: High strength safety glass used in framed or unframed windows.

Unframed Window: See Page A2

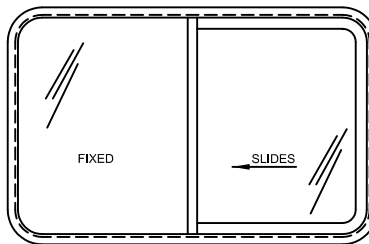
V : Vertical Dimension of Window

Vertical Slider: Vertical Slide Action- specify whether vertical raise or vertical drop.

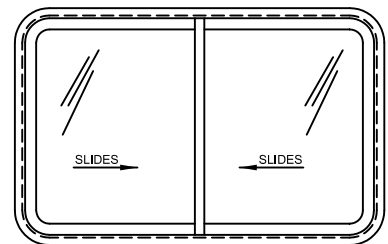
TYPES OF WINDOWS



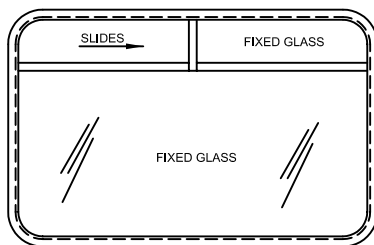
STATIONARY



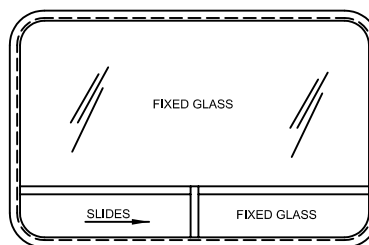
SINGLE SLIDING



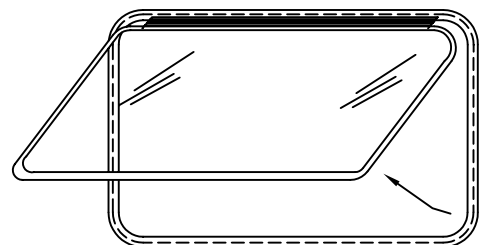
DOUBLE SLIDING



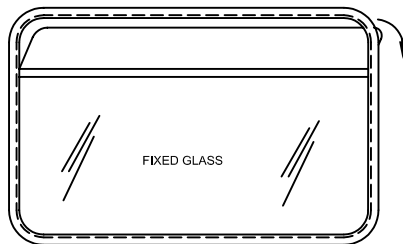
TOP T SLIDER



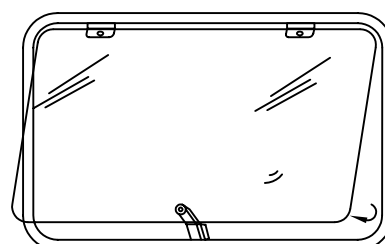
BOTTOM T SLIDER



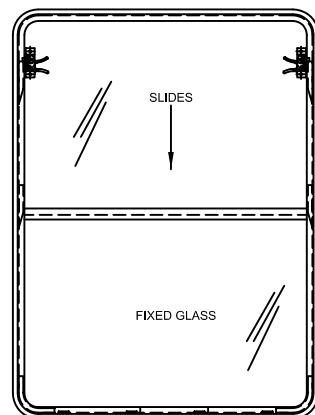
HINGED EGRESS



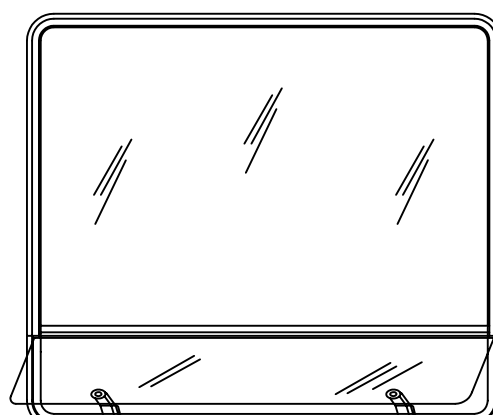
TRANSOM TIP IN



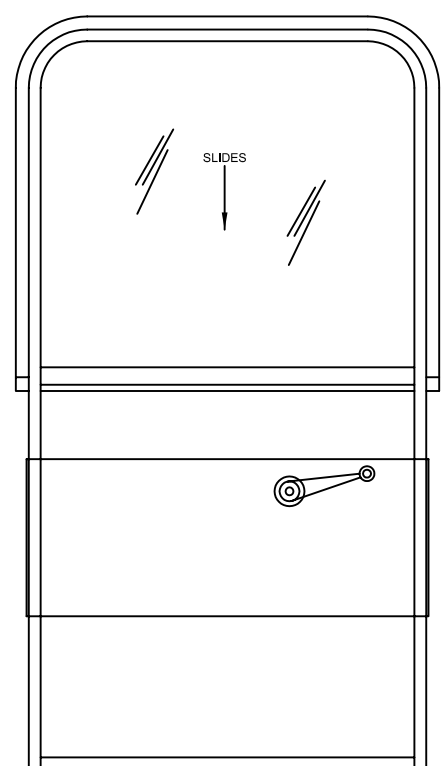
VENT



VERTICAL SLIDER



VENTED WINDSHIELD

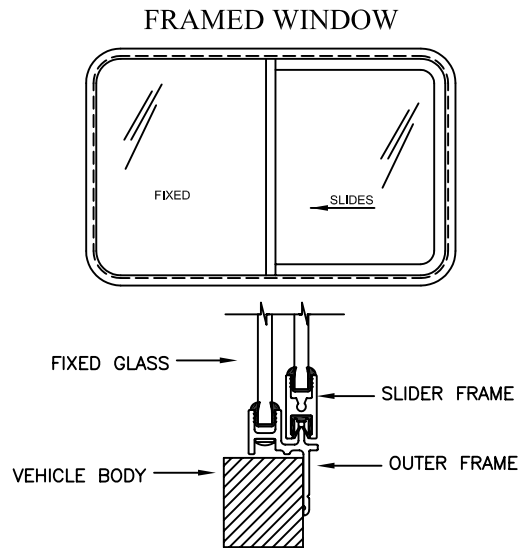


REGULATOR

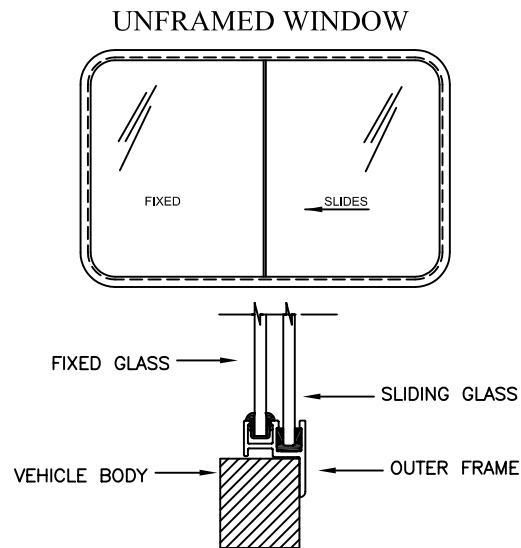
(INTERIOR VIEW)

FRAMED AND UNFRAMED WINDOWS

In a sliding window, "Framed" or "Unframed" refers to the movable glass. In an unframed window, the movable glass slides in a felt lined channel. In the framed window, the movable glass is mounted in an aluminum frame, which slides within the outer frame. This design provides for easier operation and greater protection from glass breakage.



Cross-section view of lower frame

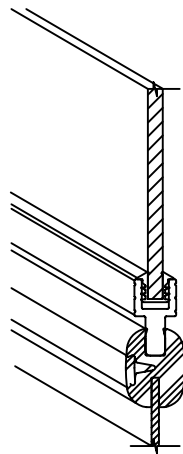


Cross-section view of lower frame

Window Mounting Methods

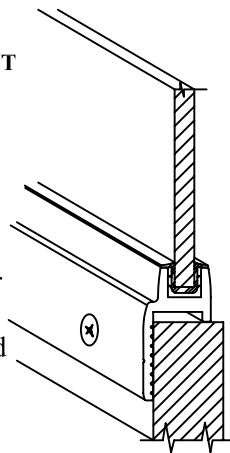
RUBBER MOUNT (Glaze In)

Excellent for mounting in sheet metal or other narrow substraights.



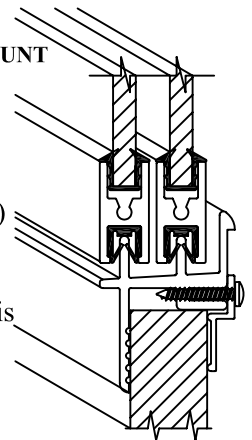
FLANGE MOUNT

Fastens or bonds directly to your sidewall -optional interior trim ring provides finished look

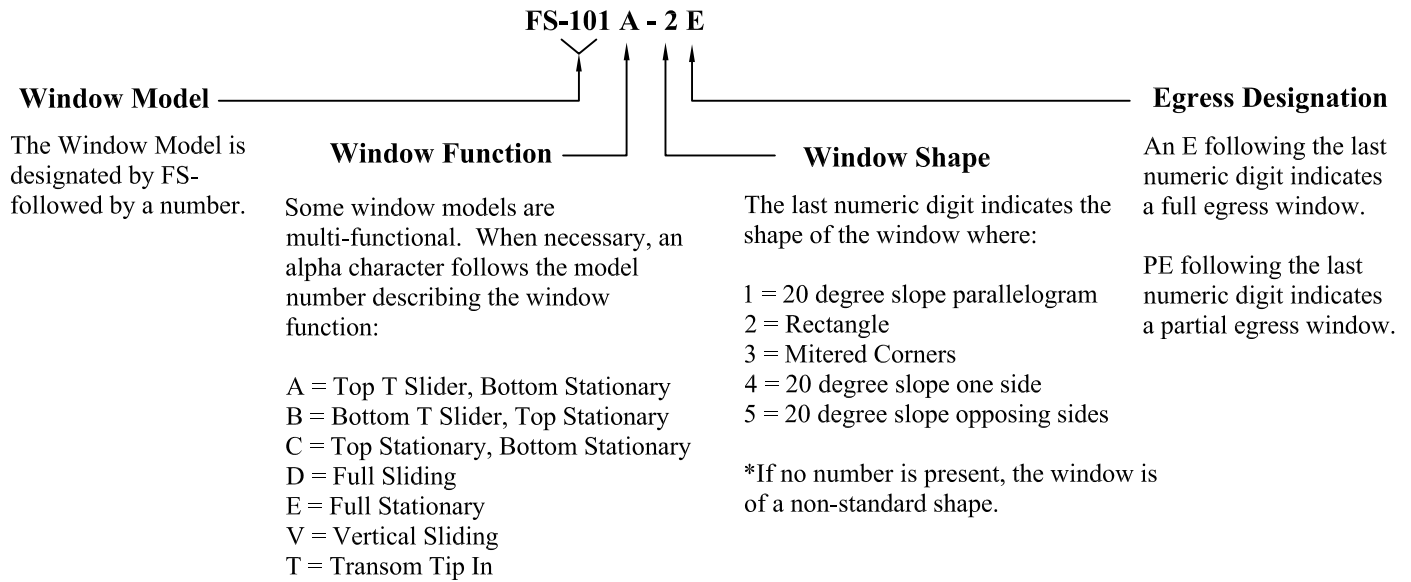


CLAMP RING MOUNT

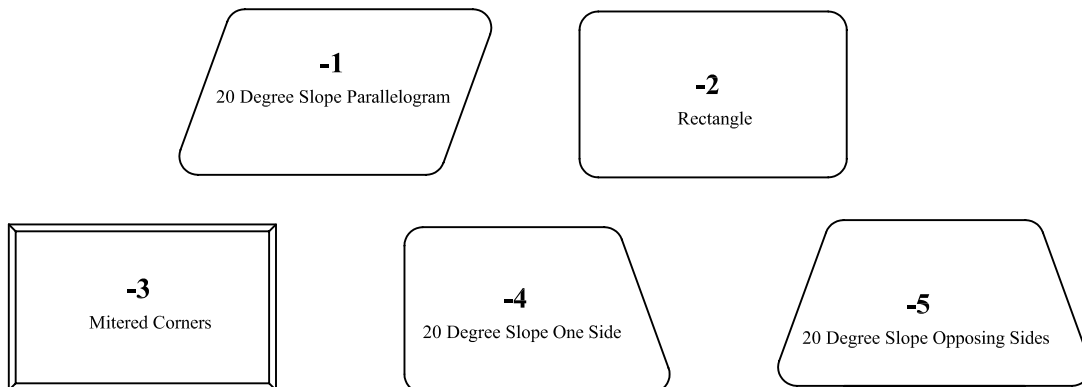
The window is secured (clamped) to the vehicle body when the interior trim ring is fastened to the window frame.



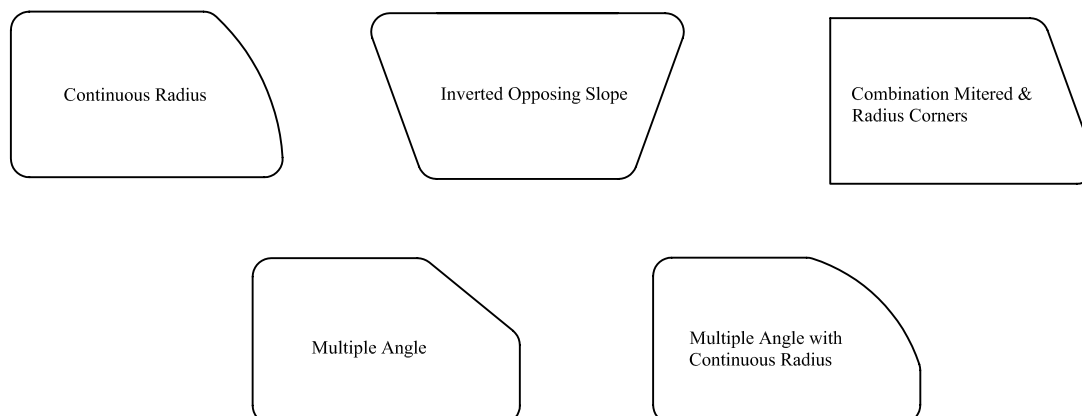
Window Model Numbering System



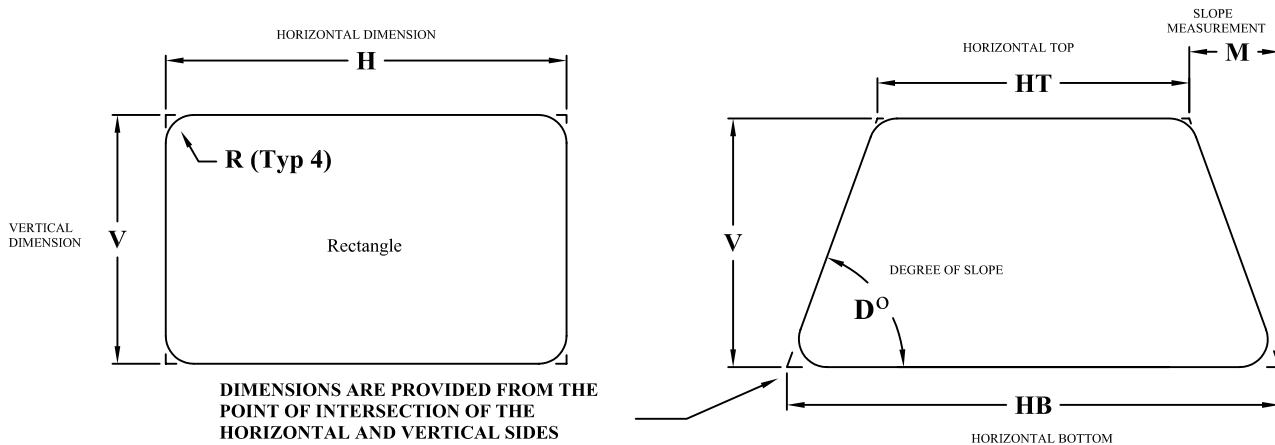
Standard Window Shapes



Popular Irregular Window Shapes



PROVIDING WINDOW SIZE INFORMATION

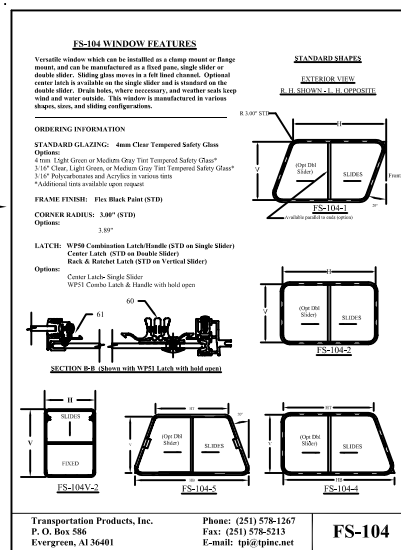
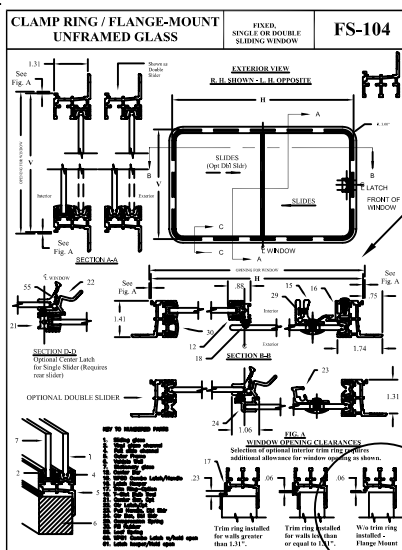


THE DATA SHEETS CONTAIN SIZING INFORMATION AS SHOWN

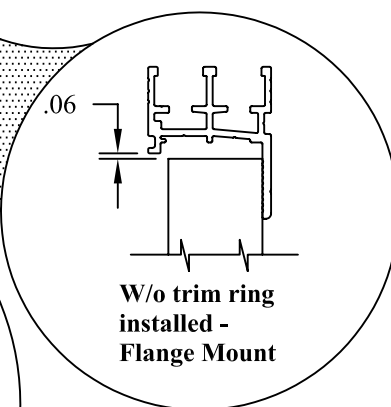
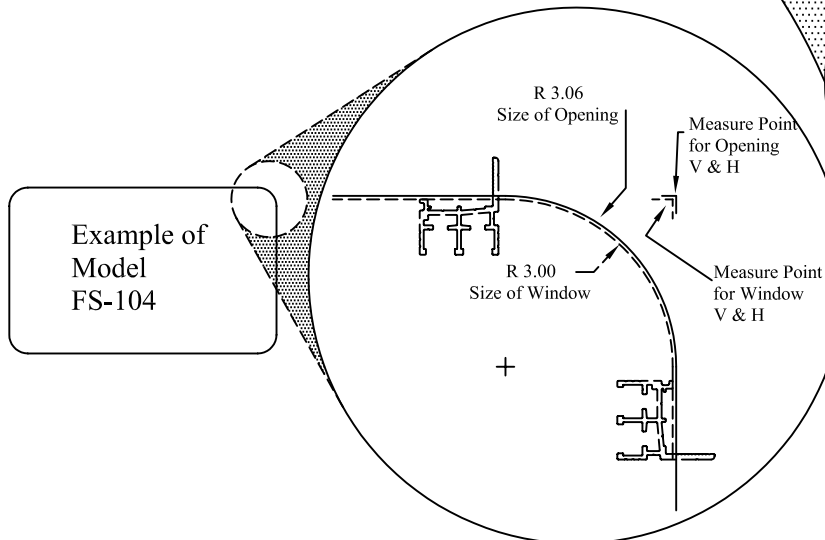
Indicates the point from which to measure
for the H dimension

Indicates the available radius
dimensions

Indicates the point from which to measure for the V dimension



Indicates the proper allowance between window opening and window frame



NOTE: The allowance between the size of the window and the size of the opening continues the entire perimeter of the window. Therefore, if the allowance dimension is .06" (1/16") on each side, the window will be a total of .12" (1/8") smaller than the opening in both the vertical and horizontal dimensions. Accordingly, if the stated allowance dimension is .31" (5/16"), the window will be a total of .62" (5/8") smaller overall opening.



801 South Main Street
P.O. Box 586
Evergreen, AL. 36401
Phone: (251) 578-1267
Fax: (251) 578-5213
tpi@tpiwindows.com

WINDOW QUOTE /ORDER FORM

COPY AS NEEDED

Company Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

Contact Name: _____ E-mail: _____

☐ Quote ☐ Order (select one)

If order, please provide P. O. #: _____

1. Window MODEL#: _____
(Select from the Standard Window Styles List, and enter the complete model # (i.e. FS-59E-2) and complete items 2 thru 10, or enter NON-STANDARD followed by the window model (ie. Non-Standard FS-59) and complete this form front and back. (If your unsure about the Model #, enter Non-Standard and we'll determine the Model# for you)

2. Glazing Thickness and Tint: _____

☐ Tempered Glass ☐ Laminated Glass Other: _____

(From Data Sheet, enter STD or enter your desired tint from the Glazing options section.)

3. Frame Finish: _____

(From Data Sheet, enter STD or enter your desired finish from the Frame Finish options section.)

4. Trim Ring Option: (Flange or Clamp Ring Mount) ☐ Yes ☐ No

If yes, specify the total thickness of your vehicle wall _____ in.

5. Specify the size of the window: V- dimension _____ in.

(Or provide dimensional sketch of opening on back) H -dimension or HT - _____ in.

& HB - _____ in.

Specify the Corner Radius dimension or Mitered (From the Data Sheet) _____ in.

6. Specify Other Equipment or Options (From the Standard Window Styles List & Data Sheet ie., Slide action- single slider, single rear slider or double slider , optional latch, center post slope, screens etc.)

7. Specify Quantity: RH _____ LH _____ Total _____

8. Estimated annual usage: _____

9. Type of Vehicle: _____

10. Your Reference # for this Quote/Order: _____

COMPLETE THIS SECTION FOR NON-STANDARD WINDOWS

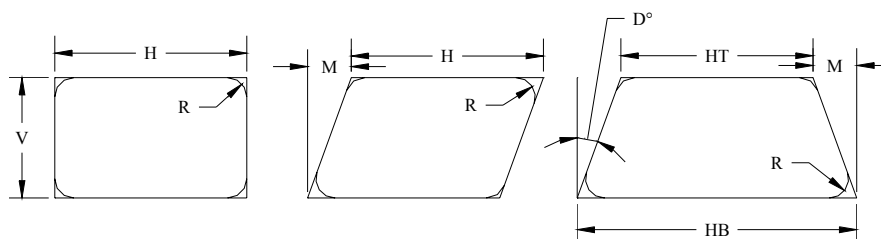
11. Method of Mounting: (Complete if no Model # entry was made in Item 1)

☐ Rubber ☐ Flange ☐ Clamp Ring

Specify Wall Thickness (if not entered in item 4): _____

12. Please provide sketch below of your window opening. (Or Attach Separate Drawing)
(Dimensions are measured from point to point and the minimum required measurements are shown below) :

V= Vertical Dimension H= Horizontal Dimension HT= Horizontal Top (for sloped windows)
HB= Horizontal Bottom (for sloped windows) R= Radius D= Degree of Slope
M= Slope Measurement



Front

As viewed from Outside the Vehicle

13. Direction of Glass to Slide: ☐ Front to Rear ☐ Rear to Front ☐ Double Slide

Vertical Window Slide: ☐ Vertical Raise ☐ Vertical Drop

14. Screens: ☐ Fixed ☐ Sliding (Removable) ☐ Not Required

15. When mounted, does window have any degree of tilt top to bottom or front to rear?
☐ No ☐ Yes. If so, Angle in degrees, and direction _____

16. Center Post: ☐ Vertical (Standard) ☐ Sloped/Parallel to End

(FAX, MAIL OR EMAIL THIS FORM TO THE ADDRESS ABOVE)