

## Window Types

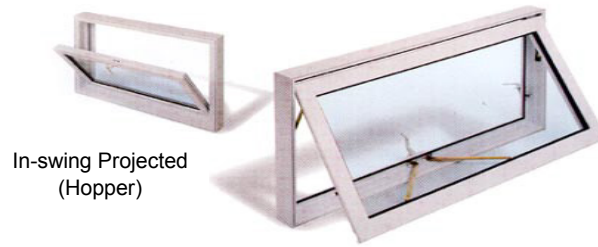
### Casement / Projected

Casement and projected windows operate by moving away, or “projecting,” from the plane of the window frame, as awning or hopper vents, and as in-swinging or out-swinging casement vents. Casement windows operate about a vertical axis while projected windows open and close horizontally. These window types use compression-seal weatherstripping, and are offered with adjoining fixed windows.

Graham’s casement and projected windows are architectural grade products with superior performance and durability. With countless configuration possibilities, glazing options and accessories; these windows are some of the most versatile that we provide.



Out-swing Casement



In-swing Projected (Hopper)

Out-swing Projected

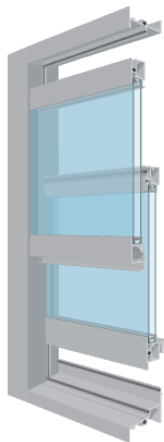


Fixed over In-swing Projected (Hopper)

### Hung Windows

Hung windows operating vertically where the weight of the sash is counterbalanced by a balance system mounted within the window frame. A double hung window can operate both the upper and lower sash, while on a single hung; only the lower sash can open. The sash can either be side-loaded or tilt-in style.

We also offer dual or “split sash” with blinds, a pulley balance system where both sash operate simultaneously, and are one of the few manufacturers capable of providing true triple hung windows where all sash can operate.



Side-load Double Hung



Tilt Double Hung

## Horizontal Sliding Windows

Horizontal sliding windows or “sliders” consist of one or more horizontal sash in a master frame. The operable sash glides on rollers for easy operation and low operating forces. A single sash or all sashes can operate dependent on needs and preference. These “by-pass” sash allow cleaning from the interior without sash removal.

We offer multiple configurations and hardware options. Each model can be used in conjunction with either a fixed window series or other operating window types.



## Fixed Windows

Fixed windows as the name implies, do not have operable sash or vents. The glazing is installed directly into the main frame members. Because there are no operable parts, these windows do incredible well for air and water performance.

Our fixed window series are designed to compliment our operable window lines or be used separately for areas not requiring ventilation.



### Dual Action or Tilt-Turn Window

Dual action windows – A dual action or “tilt-turn” window operates as a bottom hinged or as a side hinged window via the use of specialized multi-function hardware. When it is in the “tilt” mode the top of the vent opens slightly inward for ventilation; and when in the “turn” mode the vent can open fully similar to a side hinged door.



### Doors

Horizontal sliding doors consist of one or more horizontally operable door panels in a master frame. The operable panel glides on rollers for easy operation and low operating forces. A single panel or all panels can operate dependent on needs and preference.



Terrace doors are side-hinged to swing inward or outward. Single leaf doors, and French style double doors with are available. These doors feature multi-point hardware activated from a single locking handle.



### Blast Resistant Windows & Doors

Blast resistant products offer protection in the event of a bomb blast. These window and door designs incorporate enhanced glazing and anchorage to protect to the project designated blast pressure. We offer a full line of blast resistant windows and doors of all operation type.



### Hurricane Resistant Windows & Doors

Hurricane resistant products protect life and property against wind-borne debris and high winds during a hurricane. These products have to meet very stringent impact and pressure cycling tests that replicate a hurricane event and impact strikes from wind-borne objects. We have many hurricane resistant windows and door designs to choose from in all operation modes.



**Acoustical Windows and Doors**

Acoustically rated products reduce unwanted environmental sounds penetrating interior dwellings, and Graham manufactures aluminum window and door products to meet these requirements. Many of these products are installed in buildings close to major airports and other areas where city and transit noise is a nuisance. Sound mitigation is an ever increasing concern in many commercial building projects as well and we offer solutions by having products that can perform over a broad range of sound transmission reduction. All window and door types are available.

