CONCEPTUAL DETAILING FOR INTERIOR DESIGN

ISHIK UNIVERSITY/ENGINEERING FACULTY
INTERIOR DESIGN DEPARTMENT

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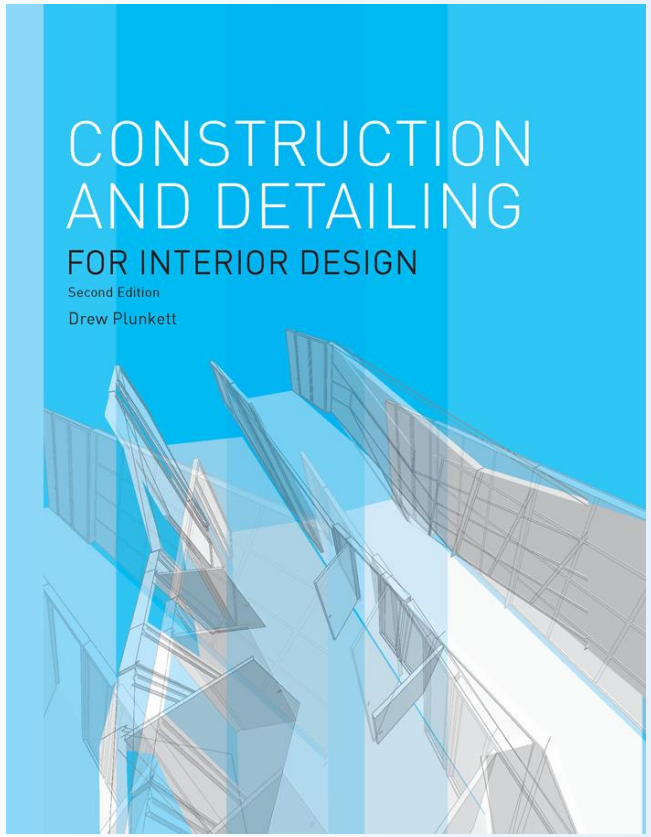
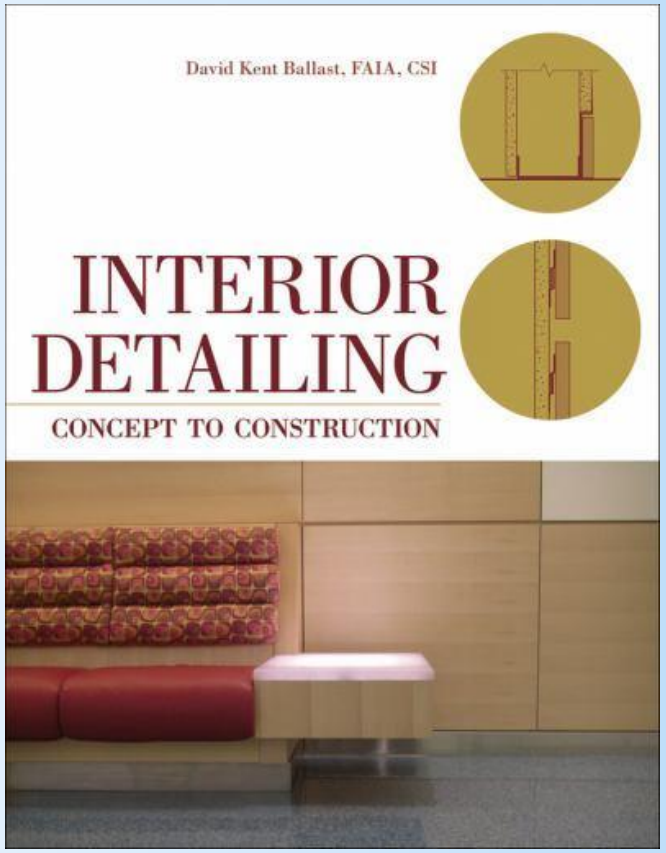
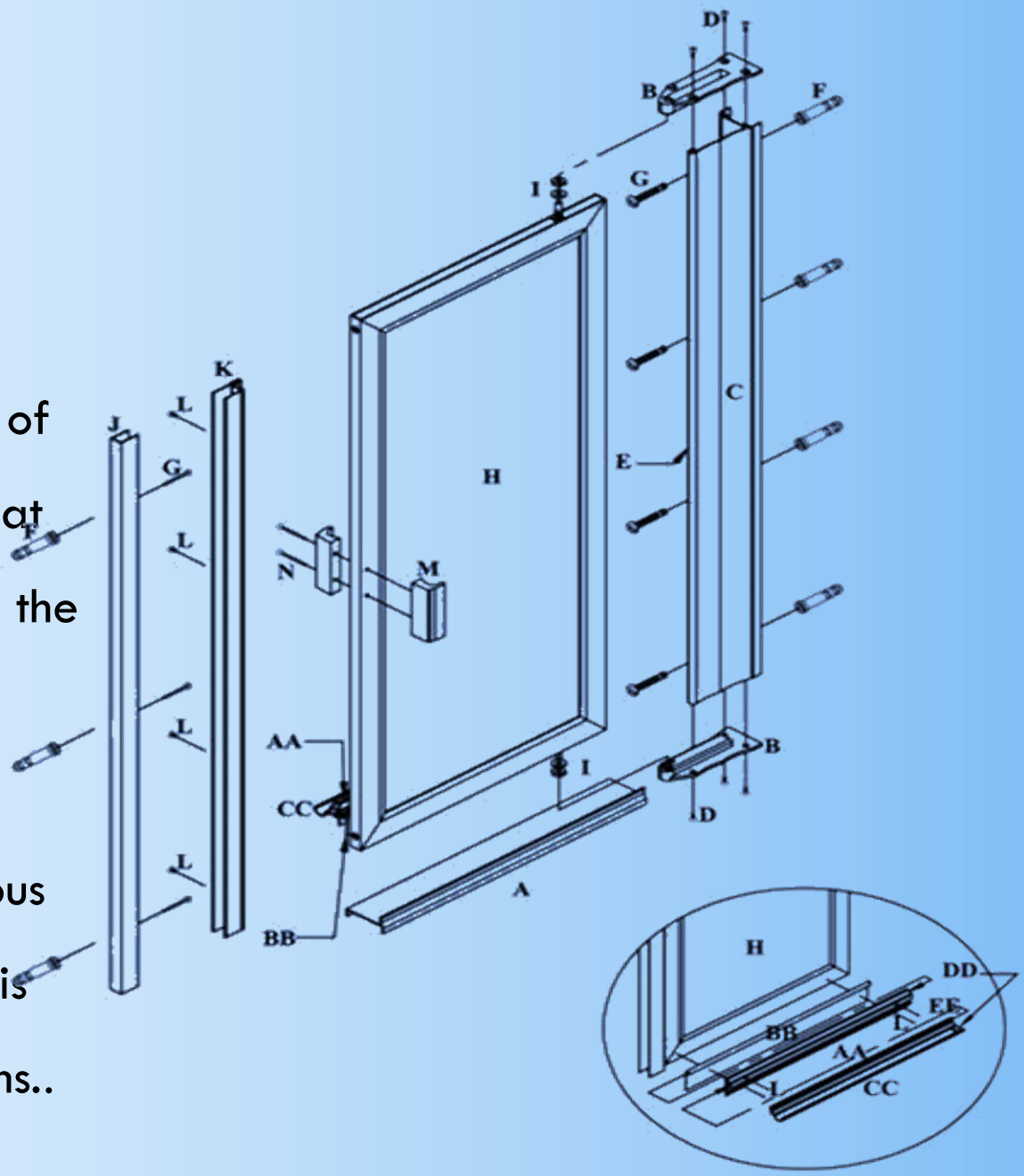
REFERENCE BOOKS





DOORS

there is considerable freedom in the construction of the opening panels (or leaves) and the frames that trim wall openings and carry the hinges on which the leaves pivot. Essential principles of installation remain important as the opening and shutting of door-leaves subjects adjacent finishes to continuous impact. If these principles are understood, there is scope for creative variations on standard solutions..



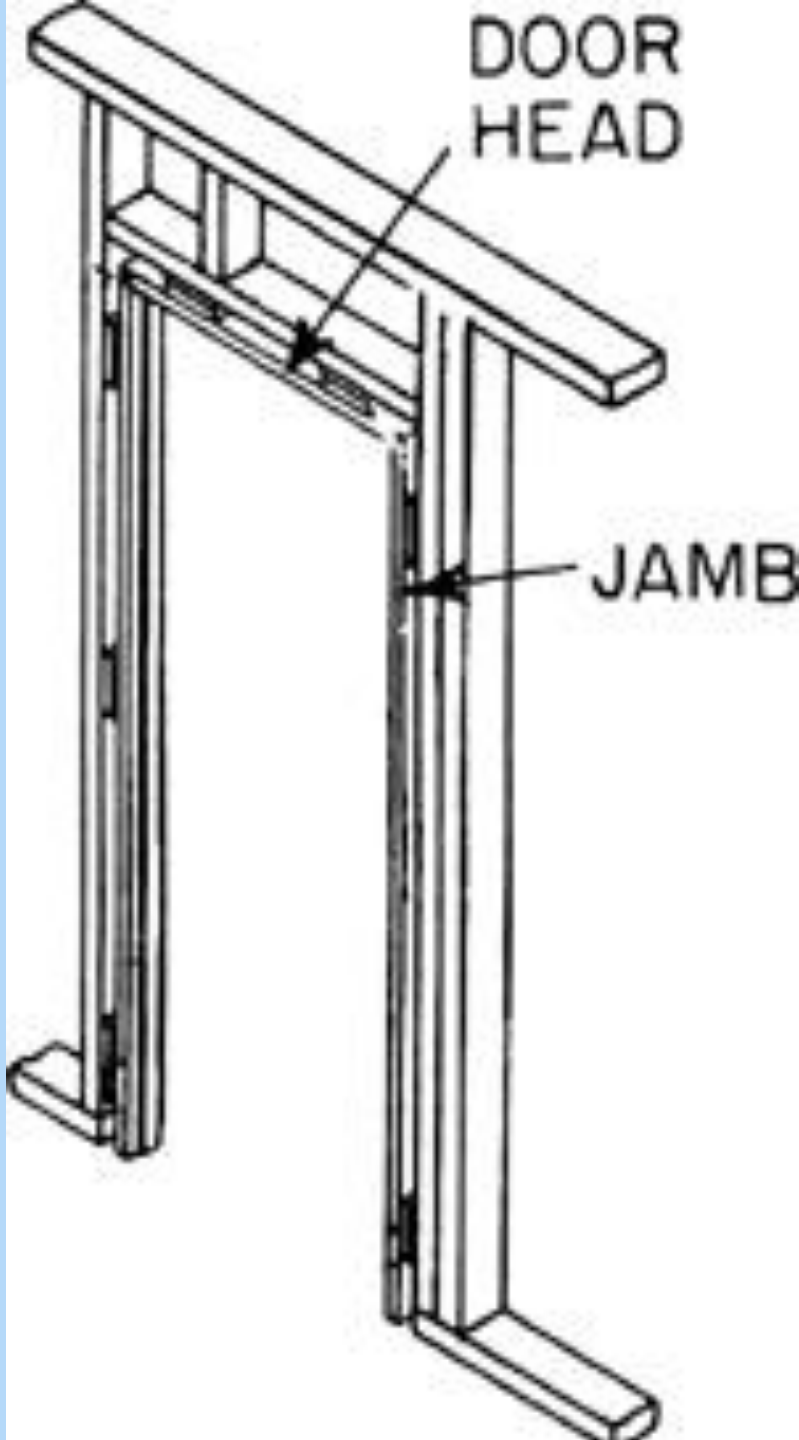
STANDARD MATERIALS AND SIZING

While leaves and frames may be manufactured from metals and plastics, timber remains the most common material. Hardwoods are favoured for the decorative qualities of their grains, while softwoods are usually painted.

DOOR CONSTRUCTION

Jambs and heads

The word ‘jamb’ refers to vertical framing on each side of a door and ‘head’ to the horizontal framing on its upper edge. Both have the same section.

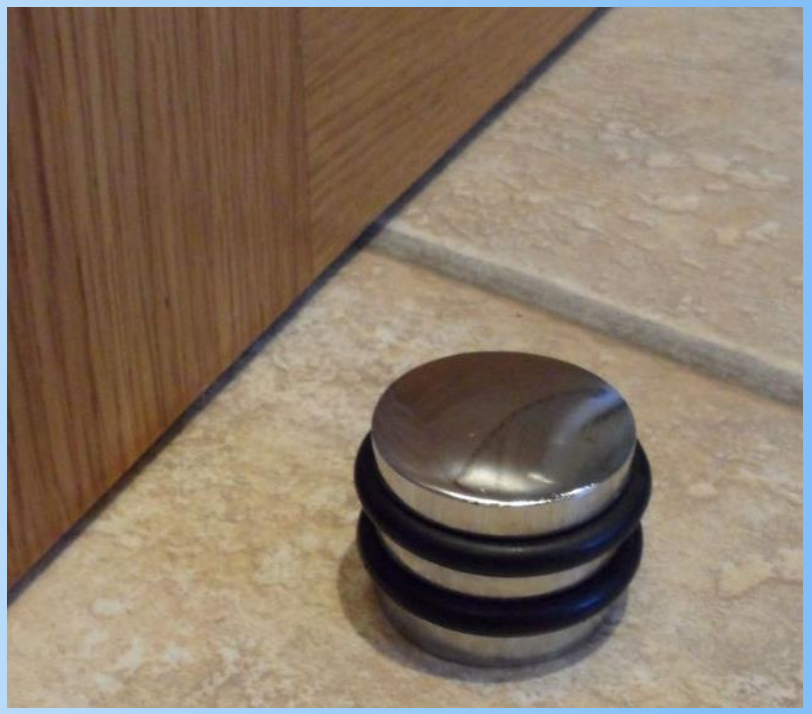


ARCHITRAVES

The junction between frame and wall finish is most vulnerable to cracking; the traditional solution is to mask it with a cover strip: the ‘architrave’. This is the most common and reliable solution

STOPS

The ‘stop’ is the element of frame against which a door closes. It need not be continuous around the opening, but usually is, for visual coherence and the reduction of draughts or noise.



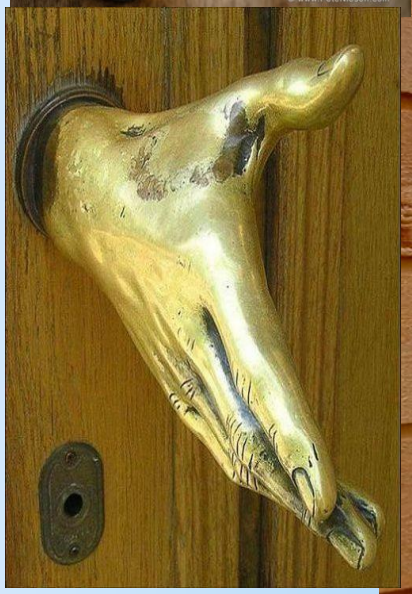
HINGES

Hinges are also standard components, but it is important to specify type and number. Heavy doors, with extensive glazing or a high fire resistance, will require more than the normal pair of hinges.

Some doors, again often for reasons of fire resistance, will need to be self-closing and some hinges can meet this requirement, either operating by gravity or springs.

DOOR HANDLE

A **door handle** is an attached object or mechanism used to manually open or close a **door**



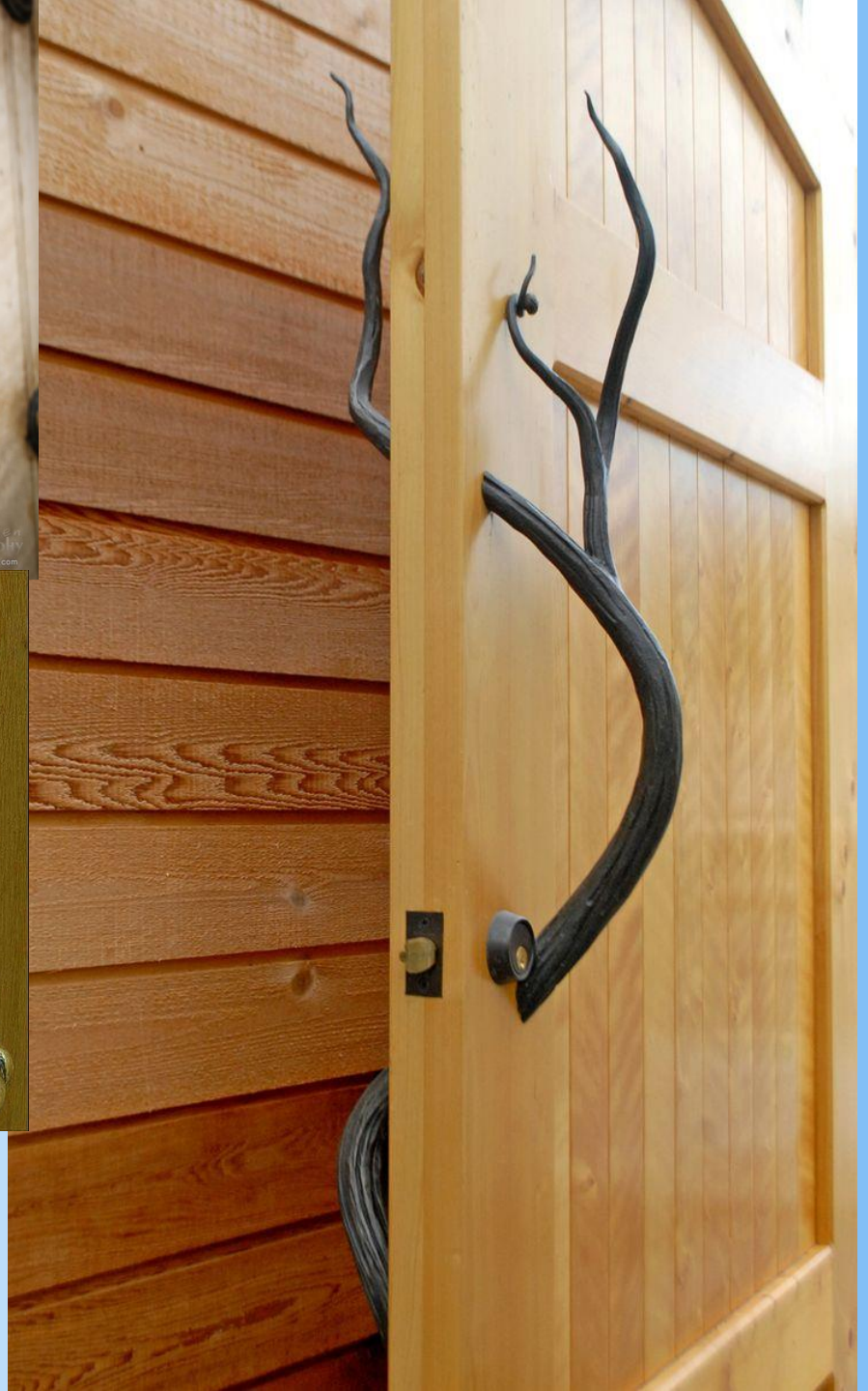
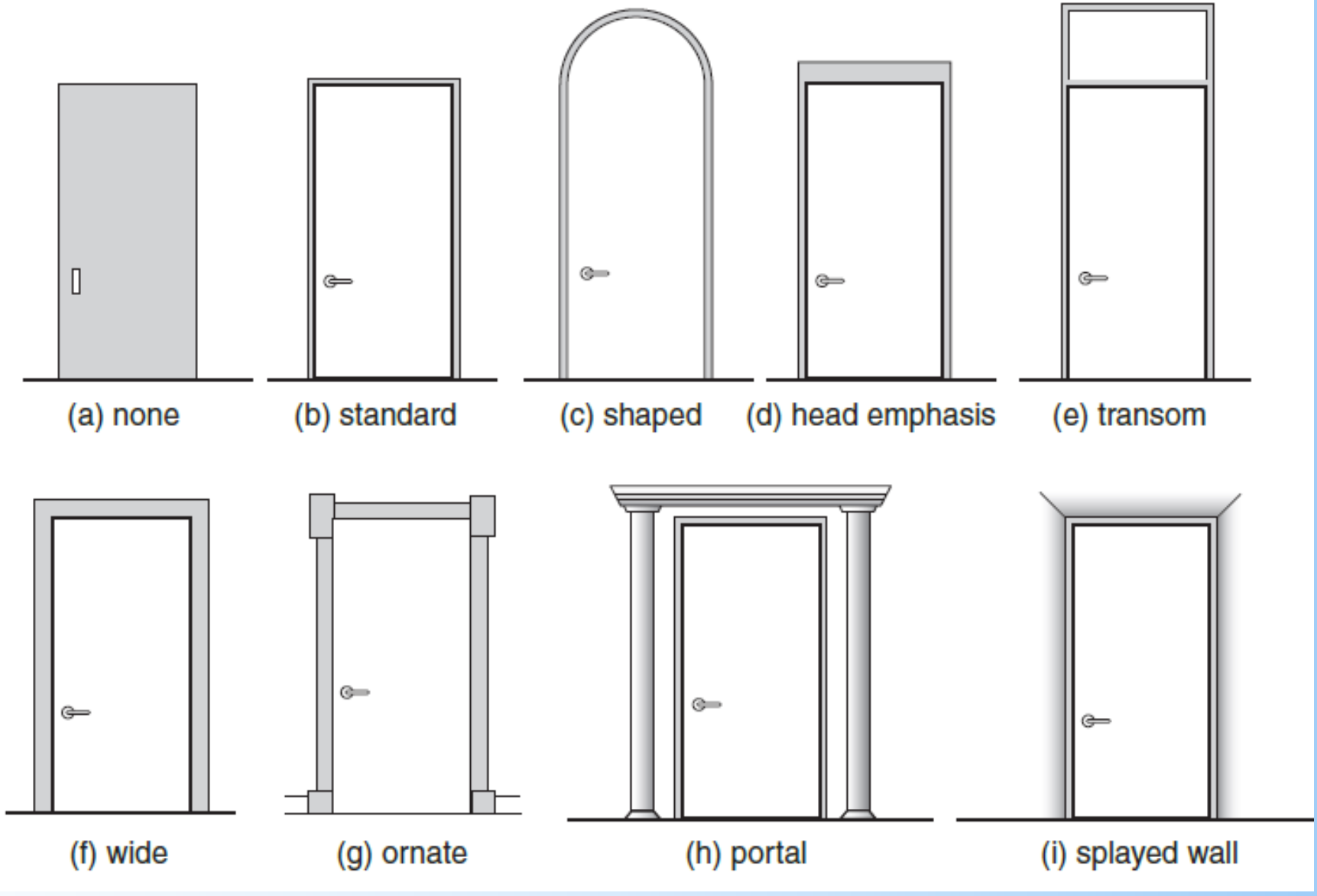


Figure 9-4 Frame concepts



WINDOWS

Glazed openings provide the interior designer with a multitude of design options to modulate the visual connection between two spaces.

Glazing can be used to affect the sense of enclosure, direct views, and allow daylight deep into buildings while satisfying functional requirements of security, acoustic control, and fire separation.

Glazing can even become a design feature in itself with the use of art or etched glass, or any of the many new glazing products available.

Figure 9-5 Types of glazed openings

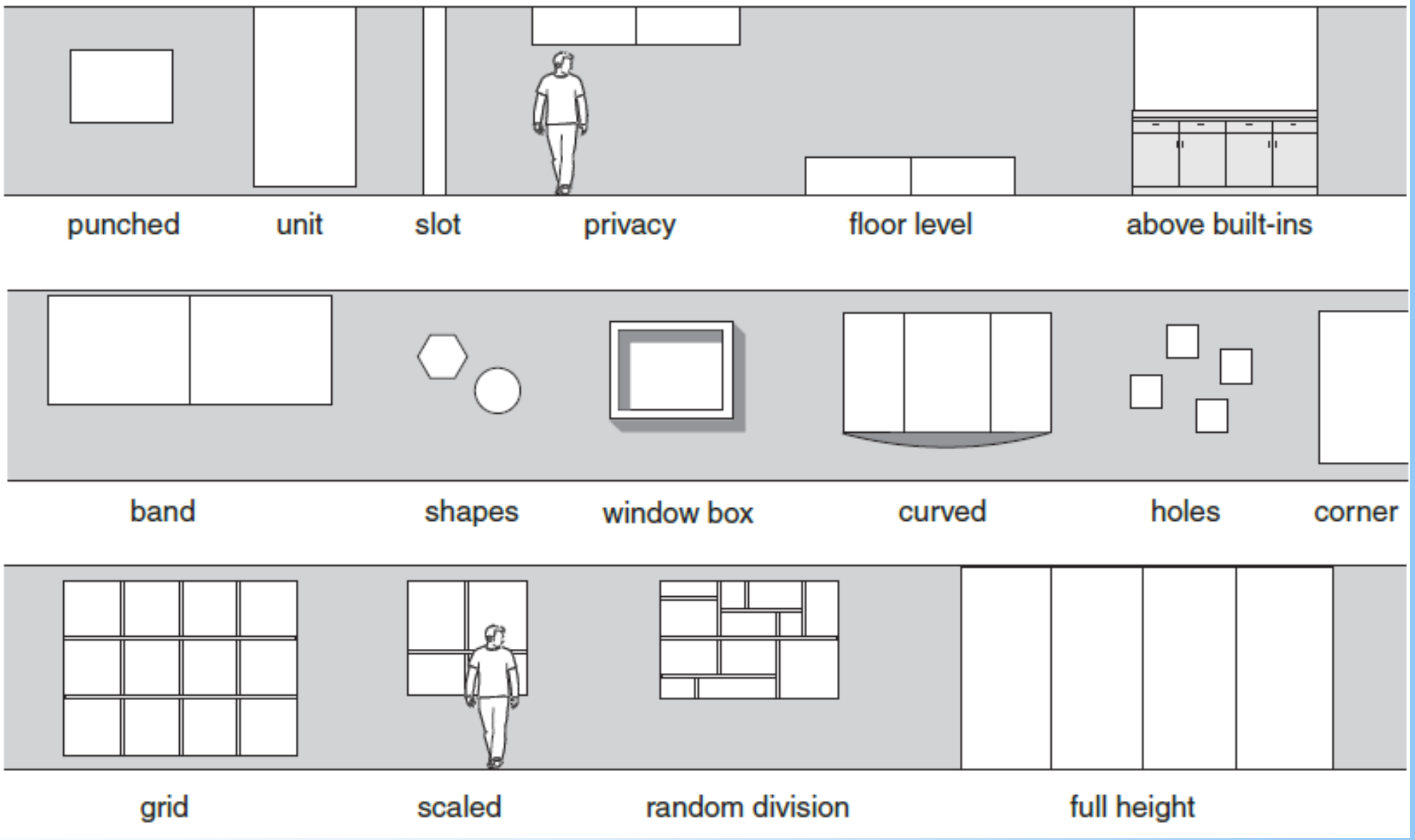
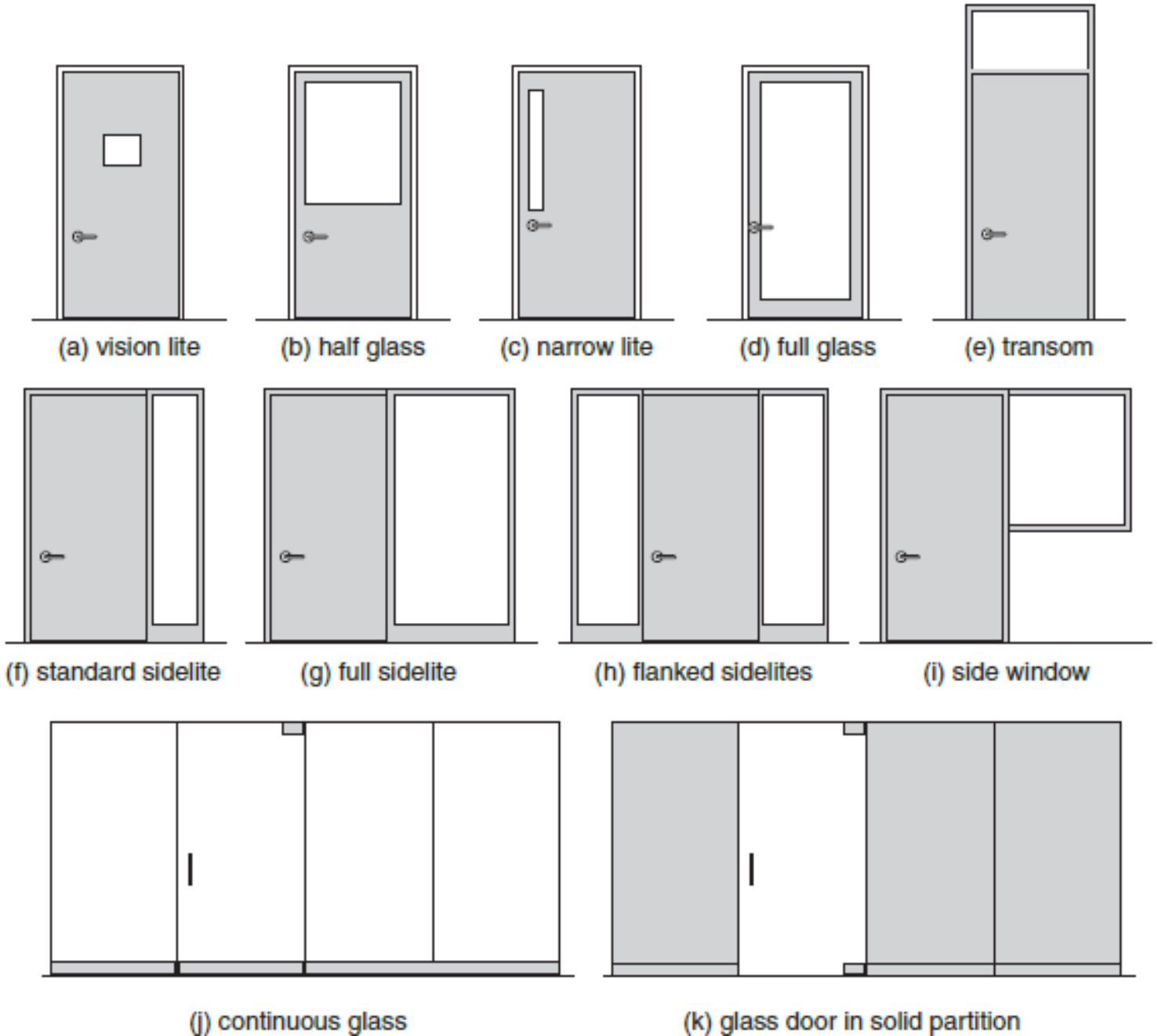
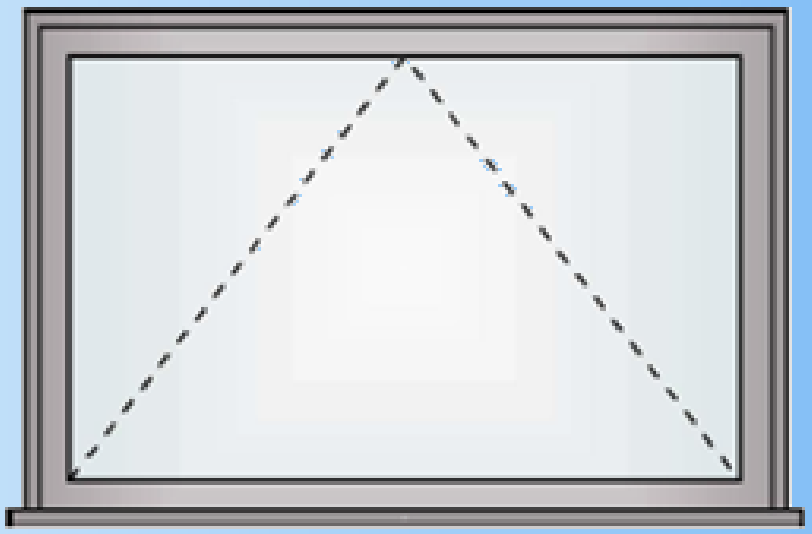


Figure 9-6 Door relationship to glazing



TYPES OF WINDOWS (OPENING)



a) Awning Windows

Awning windows pivot at the top and may have outward or inward-swinging sash; the most common is the outward swinging sash. Awning windows are usually operated with a

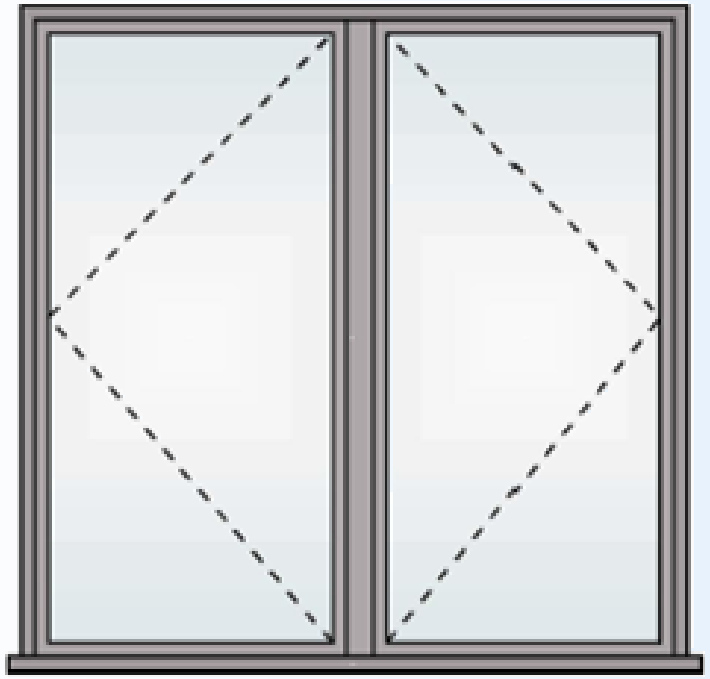
roto-gear or push-out lever so that the window can be adjusted to keep out rain but let in fresh air.

This windowtype provides up to 50% ventilation area, as the hardware does not allow them to be fully opened.

B) CASEMENT WINDOWS

Casement windows swing outward on side hinges. These windows can be hinged left or hinged right (as viewed from the outside) and are operated with a roto-gear and crank.

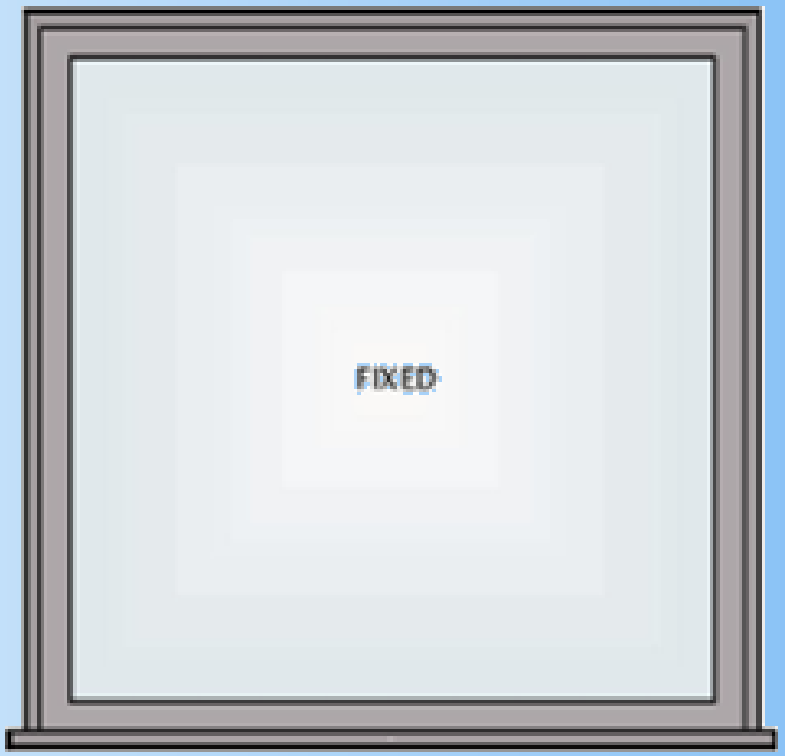
Casement windows provide almost 100% ventilation area, because they can be fully opened and the out-swinging sash can direct plenty of air into the building.



Casement

C) PICTURE WINDOWS

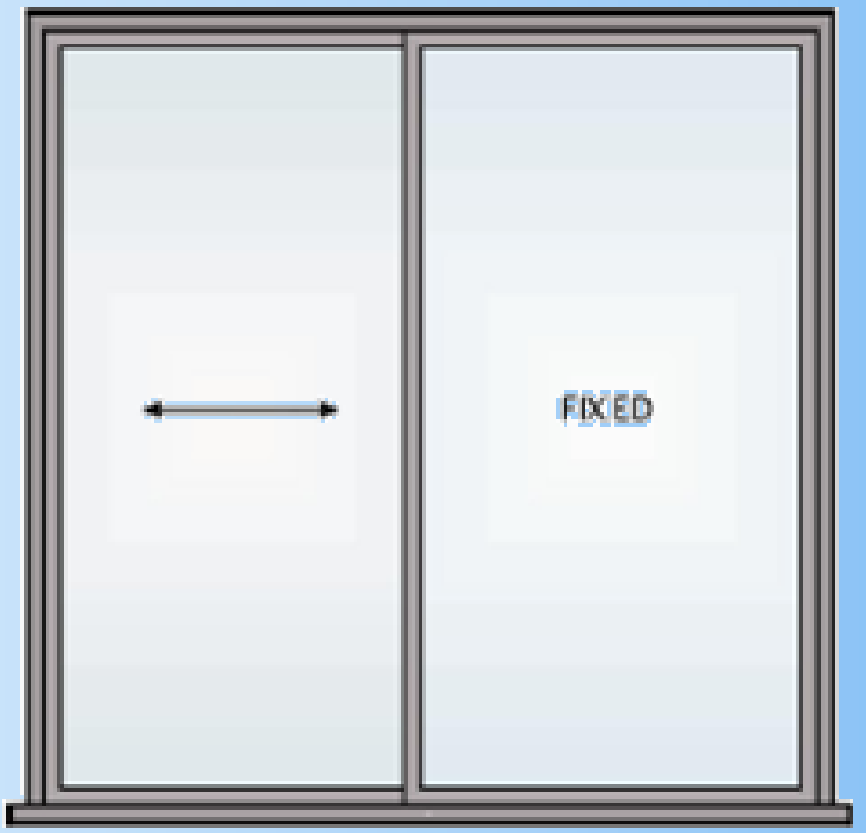
Picture windows are fixed windows that do not open. They are used to let in a lot of light and to take advantage of a view. Picture windows are often used in combination with operating windows.



Fixed

D) HORIZONTAL SLIDERS

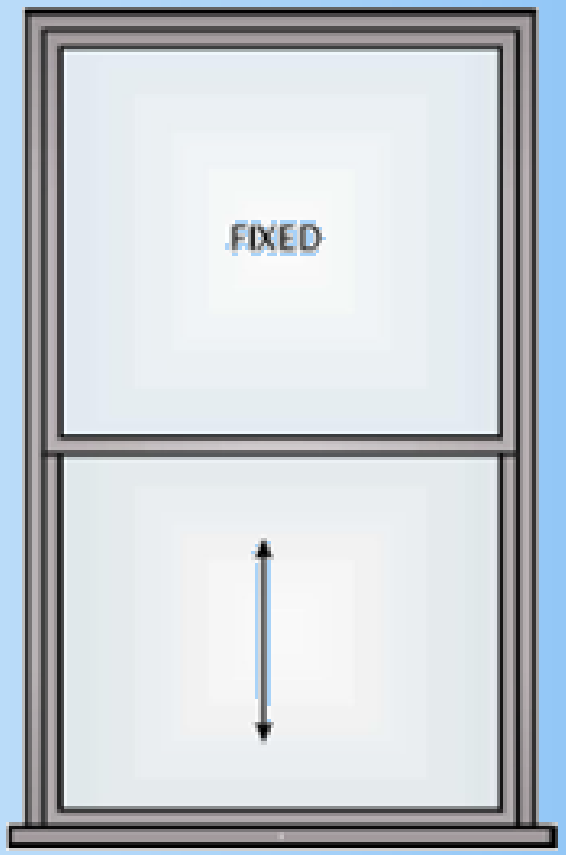
These windows have sash that slide horizontally. Single sliders have one fixed sash, while double sliders have two movable sash. Most horizontal sliders have at least one removable sash.



Sliding

E) SINGLE HUNG WINDOWS

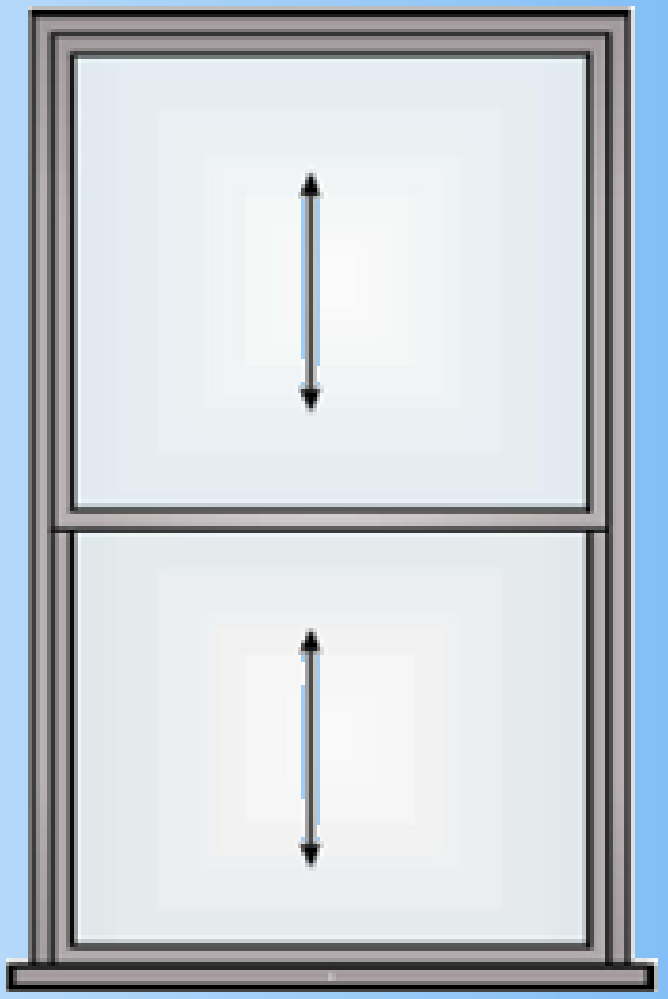
A single hung window is a vertical slider in which the top pane of glass is fixed and the bottom sash moves. In some designs, the sash tilts in for ease of cleaning.



Single Hung

F) DOUBLE HUNG WINDOWS

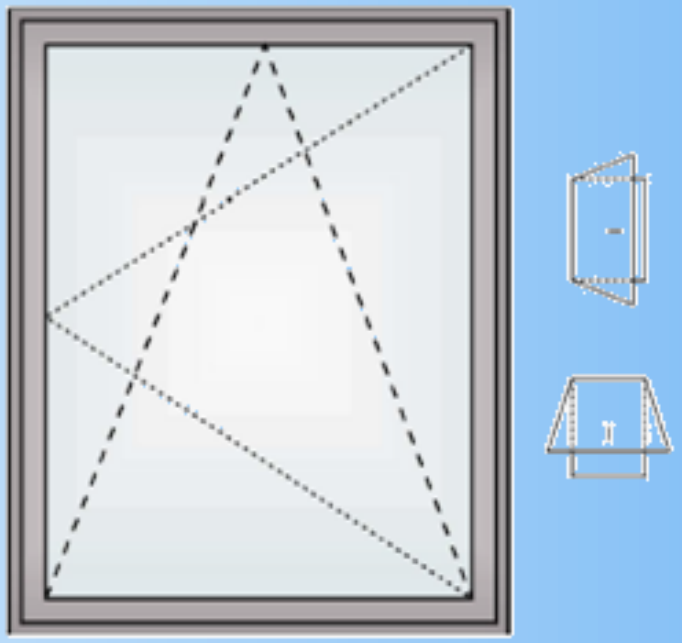
Double hung windows are similar to single hung windows, except that both sash move and are controlled by a balancing mechanism so the sash do not fall down when raised.



Double Hung

G) TILT & TURN WINDOWS

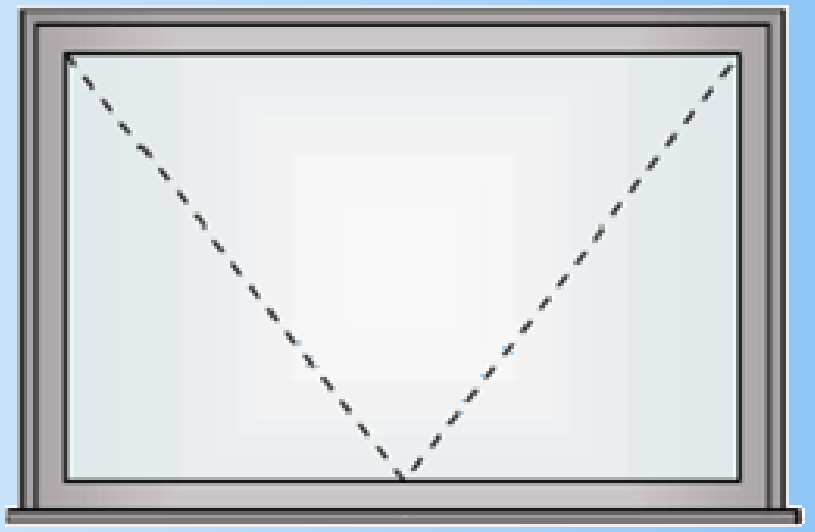
These windows first appeared in Europe but are now used in North America. Special hardware allows tilt & turn windows to tilt inwards for ventilation, or to pivot from the side like a casement window.



Tilt-and-Turn

H) HOPPER WINDOWS

A hopper window is the reverse of an awning window in that it pivots at the bottom and opens inward.

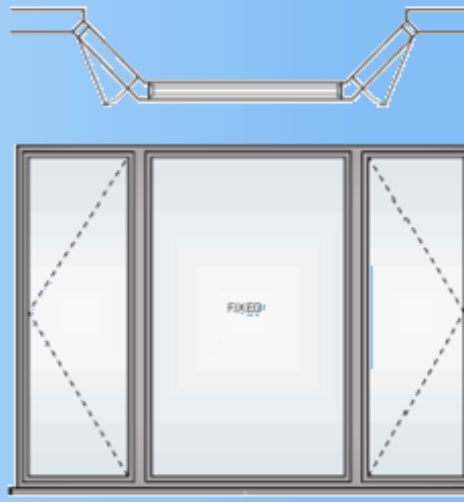


Hopper

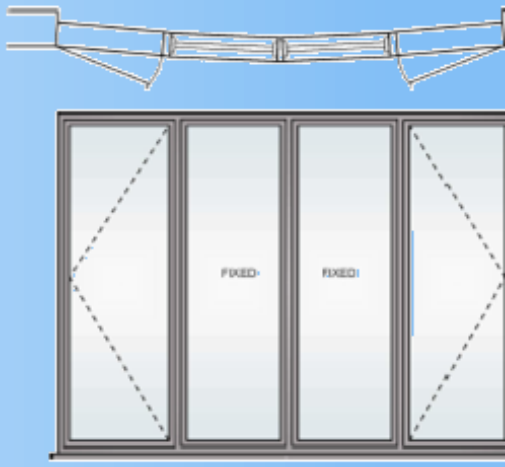
I) BAY AND BOW WINDOWS

Bays and bows are a combination of windows that project outward from a building wall. A bay window has a fixed centre window parallel to the wall flanked by two operating windows (casement or double hung windows)

attached at an angle (usually 45o). Bow windows have more than three sections set at gentle angles (usually 10o) that give the window a curved appearance (like a bow).



Bay Window

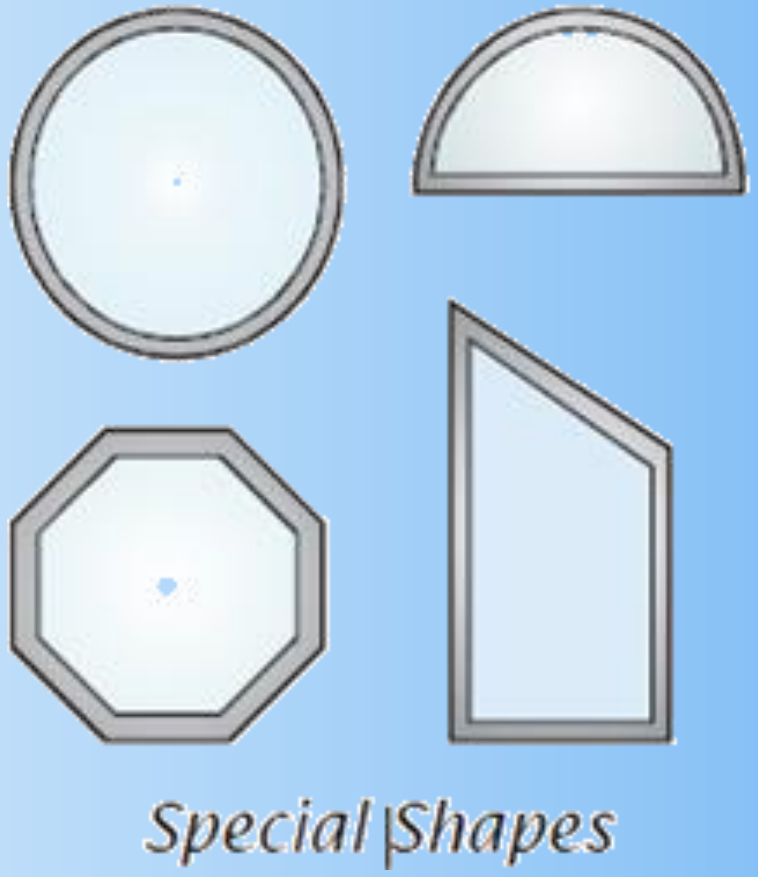


Bow Window

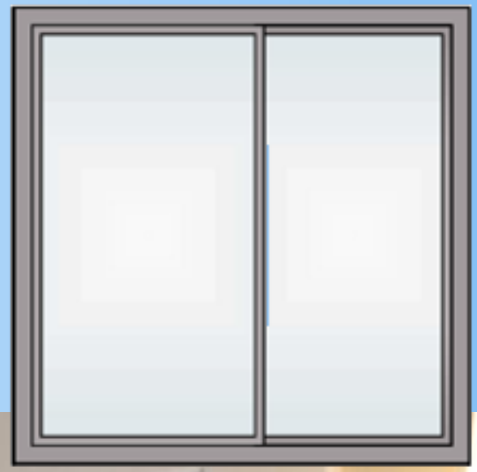
J) CUSTOM WINDOWS

There are many shapes of windows now in use, including

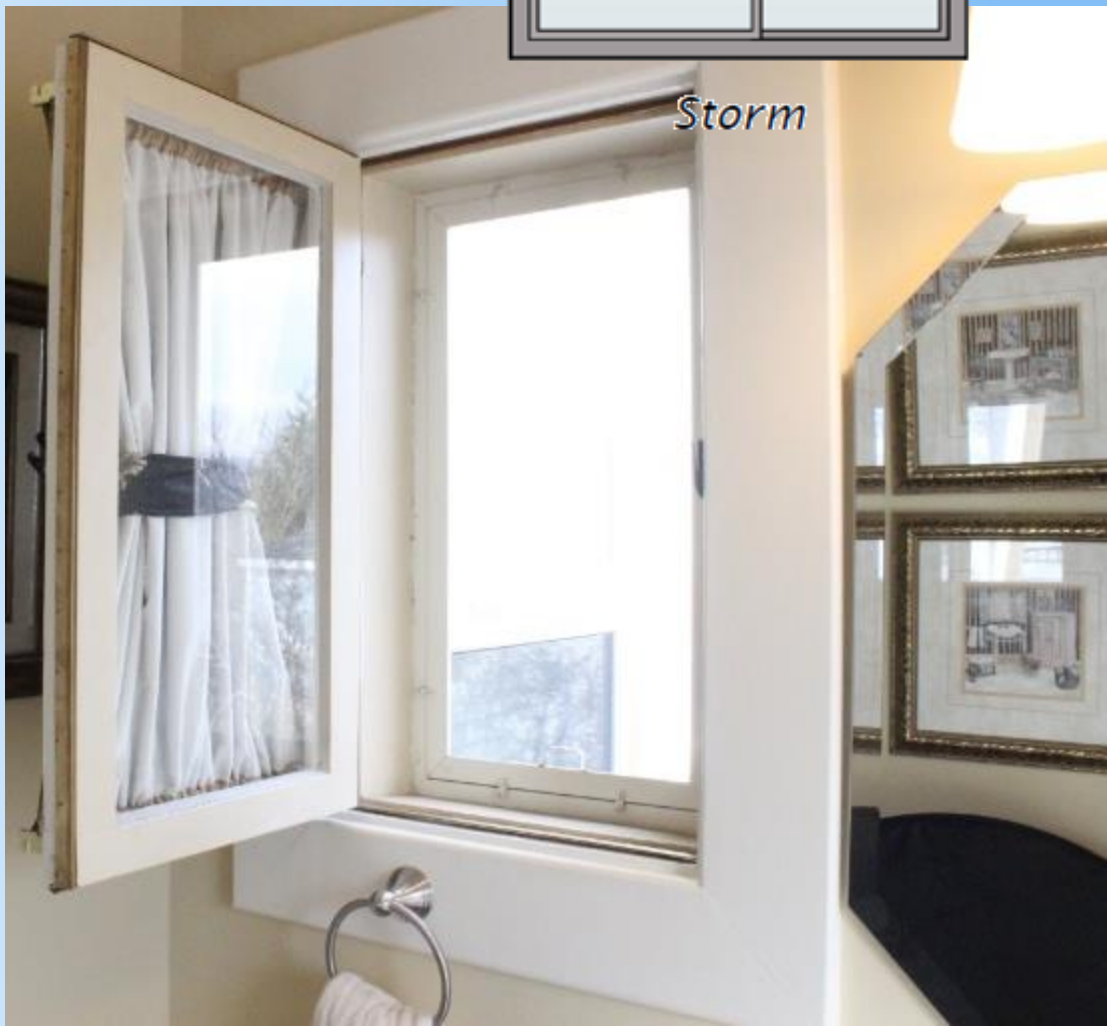
circles, half rounds, octagons, fans, and many other geometric shapes. These geometric shapes can be used alon or in combination with other windows. Custom windows can give a curved appearance to a building or can simply ad charm and character to a room.



K) STORM WINDOWS



Storm windows were very popular before double glazed units came into common use. Storm windows provided a removable double glazing on the exterior or interior of a single glazed window and were an easy way to upgrade the thermal properties without replacing windows. Storm windows are still widely used in the southern US, but are seldom used in Canada.

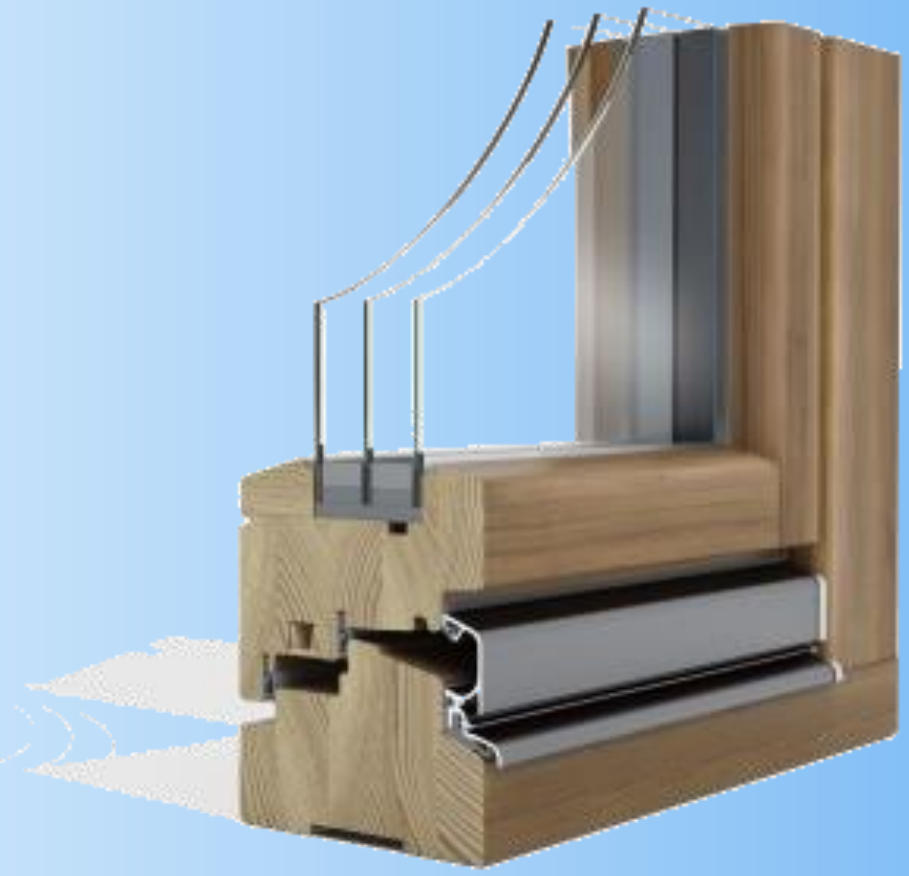


WINDOW MATERIALS

Windows are made from wood, aluminum, PVC, fiberglass, or from a combination of these materials.

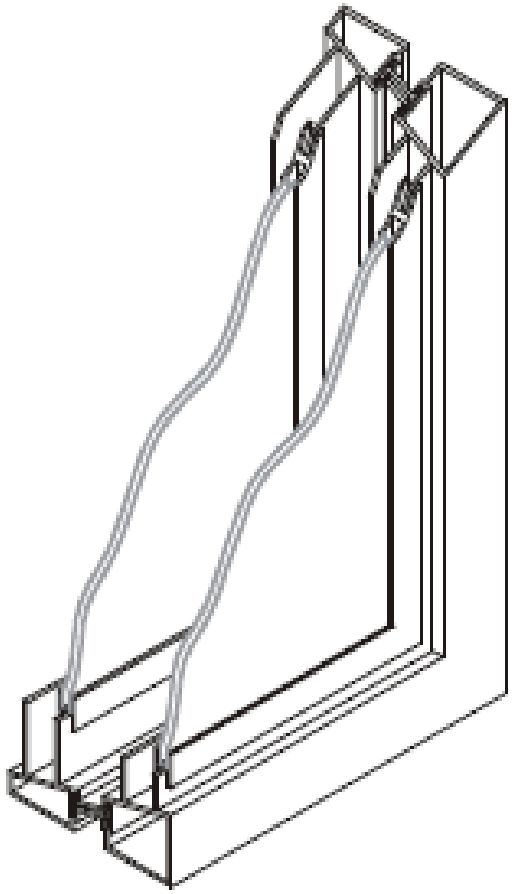
Wood Windows

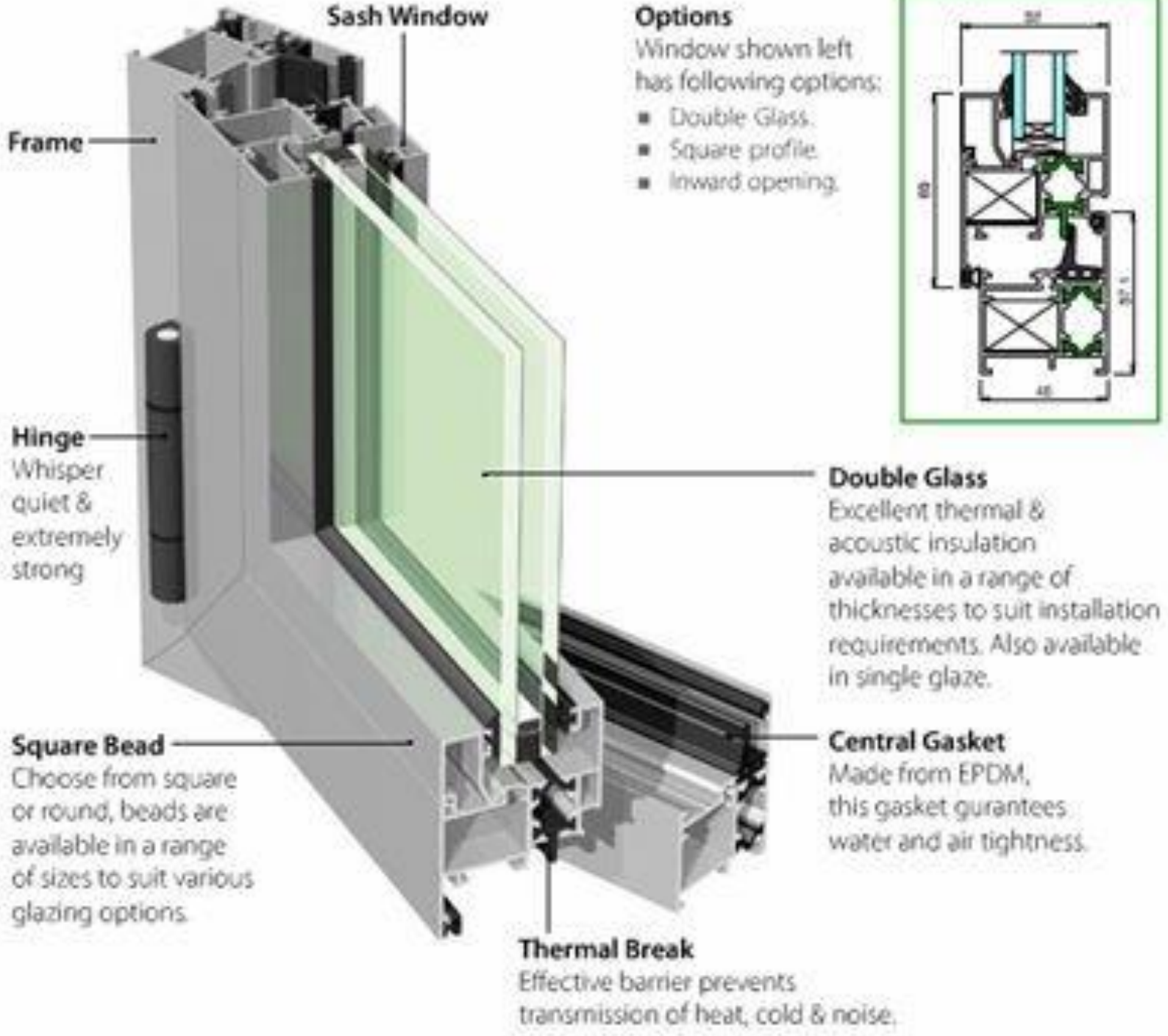
Wood windows are warm, traditional and aesthetically pleasing. Because it is a good insulator, wood does not become cold like metal and glass. Wood is treated with preservatives to prevent rotting. Wood windows can be painted on the exterior, or clad with aluminum or PVC profiles for better weathering and reduced maintenance.



Aluminum Windows

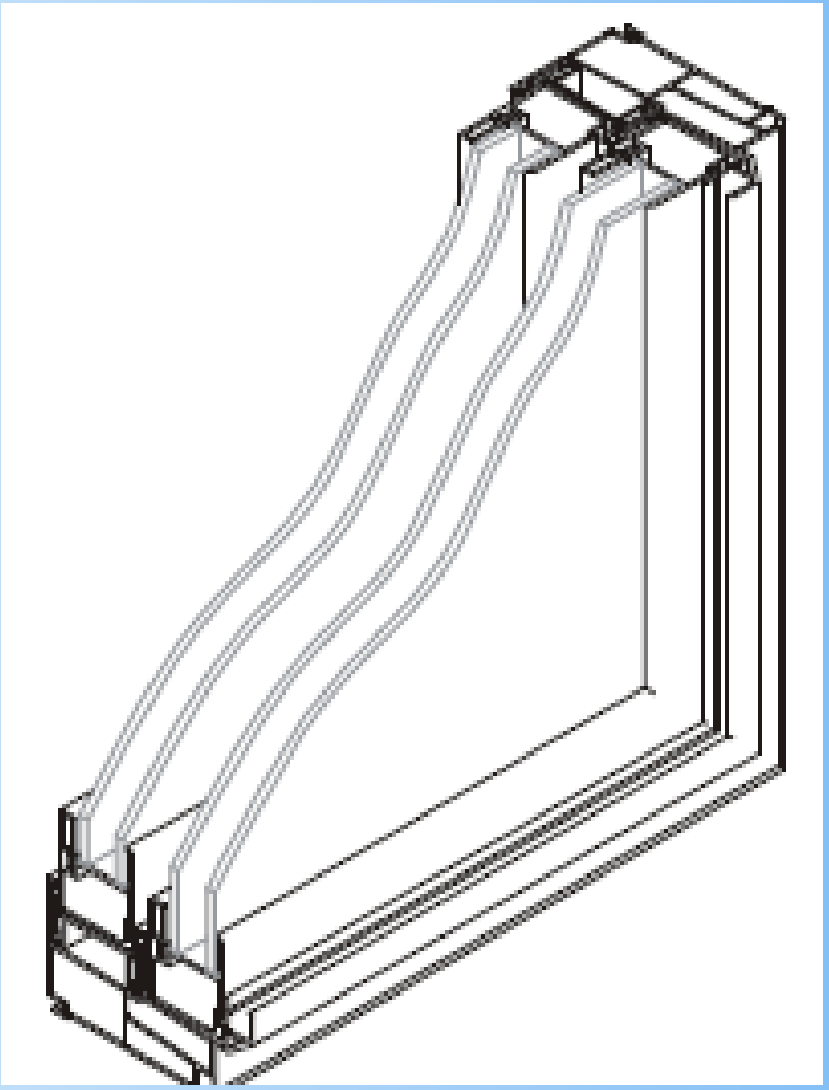
Aluminum windows are more durable than wood, and are thinner, lighter, and easier to handle. But aluminum is a poor insulator and in cold weather, and loses more heat to the exterior than wood. Most recent aluminum windows are manufactured with a thermal break, a vinyl or rubber strip that separates the exterior and interior aluminum parts of the window. The thermal break reduces the movement of cold from the outside to the inside of the building. Most commercial applications still specify aluminum windows.

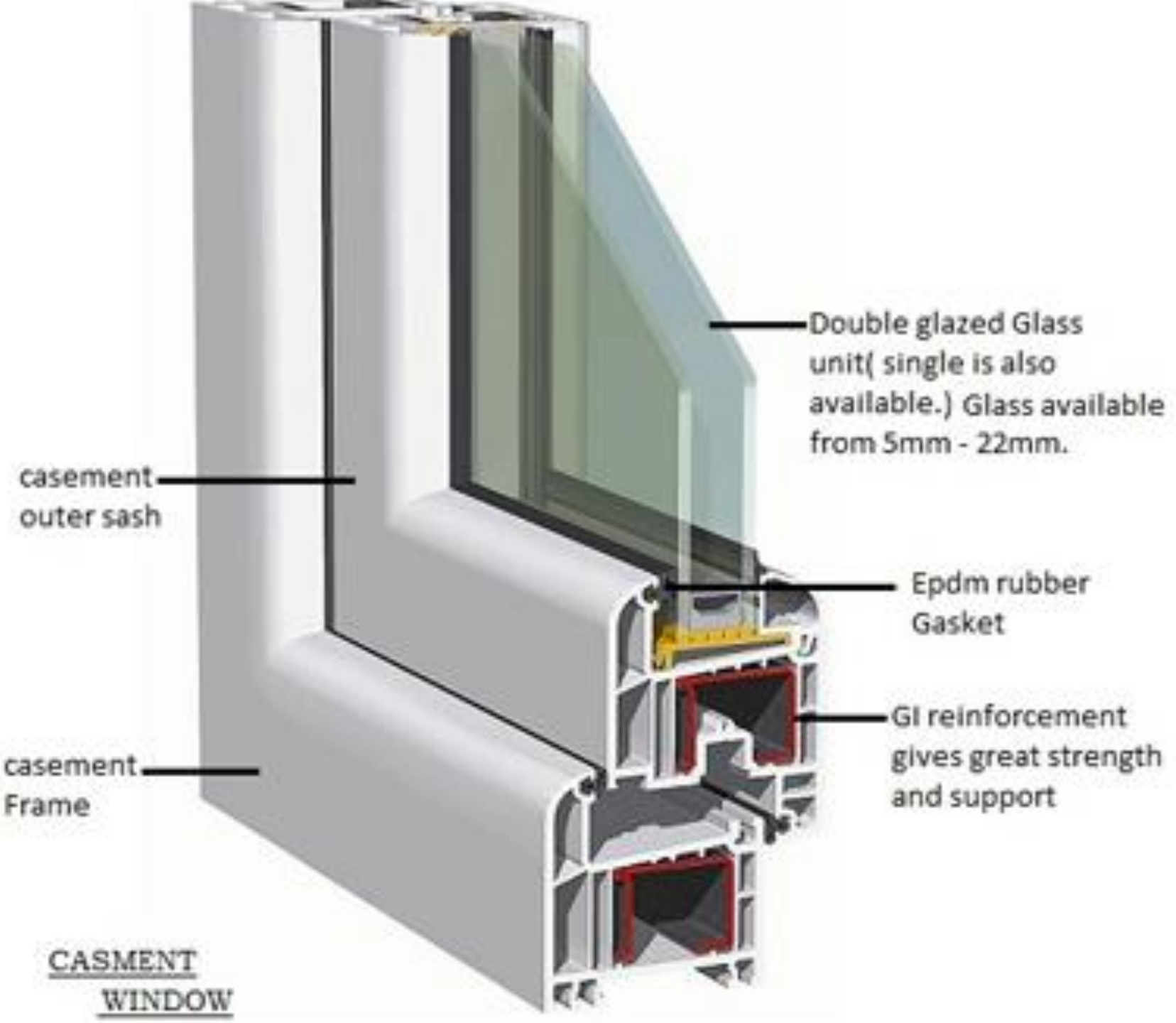



Sash Window
Frame
Hinge
Whisper quiet & extremely strong
Square Bead
Choose from square or round, beads are available in a range of sizes to suit various glazing options.
Thermal Break
Effective barrier prevents transmission of heat, cold & noise.
Double Glass
Excellent thermal & acoustic insulation available in a range of thicknesses to suit installation requirements. Also available in single glaze.
Central Gasket
Made from EPDM, this gasket gurantees water and air tightness.
Options
Window shown left has following options:
Double Glass.
Square profile.
Inward opening.

PVC Windows

PVC windows are relatively new, having only been introduced during the last 25 years. These windows are extruded from highimpact resistant polyvinyl chloride (PVC). PVC windows have excellent weathering characteristics, are almost maintenance-free and have excellent resistance to heat loss. Originally used nprimarily in renovation because PVC lends itself to non-standard size production, PVC windows are rapidly increasing in the new construction market as well. PVC is available in several extruded colours. Special painted coatings have been developed to expand the range of colours available.





CASMENT WINDOW

Fiberglass Windows

Fiberglass windows are the latest window products to be developed. The shapes are formed by a special technique called pultrusion, whereby the glass fibers are pulled through dies rather than pushed through an extruder (as PVC is extruded).

Fiberglass and PVC lineals look similar at first glance, however, fiberglass is much more rigid than PVC.