Ellison has produced a comprehensive technical and design support package which is available to architects and customers. We invite you to request any of the items including our technical binder with complete specifications and details and our interaction CD which fullyexploit our manufacturing processes, specs and details. An installation and maintenance CD is also available. Ask your representative about the hardware case which gives you an "up close" understanding of key Ellison balanced hardware components. In addition, complete specs and details are downloadable from our website.

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The balanced door concept, introduced by Ellison in 1928, provides opening and closing operation which is distinctly different from hinged, pivot hinged and continuous hinged door types. The door and frame are actually two parts of a proprietary component system which permits door operation with minimal opening pressure (or user effort), without the assistance of automatic and power-assisted operators.

When an Ellison Balanced Door is opened, approximately two thirds of the door swings outward while one third swings inward (at hinge style), thus traveling on an elliptical arc rather than the circular path required by conventionally hinged doors, allowing external wind loads to help rather than hinder the user. The Ellison Balanced Door actually pivots on two arms - located at the top and bottom of the door - which are welded to a pivoting shaft located adjacent to the door. The shaft is connected in the frame header to a concealed hydraulic checking device, and is connected at the base to a geared floor box adjacent to the threshold. The shaft contains a torsion bar spring which provides the closing force for the door. The overhead hydraulic check is part of the "check and guide assembly" that both guides the door as it opens and provides adjustable, timed closing speed.

There are a number of benefits afforded by Ellison Balanced Doors. In addition to fingertip operation, which may eliminate the need for automatic and power assisted operators in many applications, the door system requires less interior and sidewalk space because of its elliptical path. Ellison Balanced Doors eliminate intrusive overhead boxes and hardware or cutouts in the floor, yet their rugged hydraulic checking units can be quickly and easily removed and replaced by maintenance staff.
PowerNow is a classic balanced door during manual operation, and opens with power only when needed. Our revolutionary design eliminates complicated, unsightly surface-mounted hardware. A concealed low energy operator and actuating arm provide opening force on demand. Our standard hardware provides the closing force. So, when used manually, PowerNow provides the same balanced door action you’ve come to expect from Ellison doors.

In the opening sequence below (viewed from the interior), note that the actuator arm is the only visible hardware. It pushes the door fully opened. After a timed delay, the door begins to close. The arm is fully independent of the door which is closing using the normal balanced door operation.

Power opens the door on demand, Ellison closes it.

Ellison PowerNow Doors are meeting high traffic challenges at Chicago’s famed Field Museum where wheelchair accessibility and power operation must be combined with normal door use. PowerNow offers a trouble-free, dependable solution, because the patented design never engages the motor and actuator system during manual operation.
Formed stainless steel or bronze doors are constructed with a minimum stile width of 2-3/4” (3-1/2” preferred), a minimum top rail height of 2-3/4” (3-1/2” preferred), and a minimum bottom rail height of 6”. Minimum face width of frame material is 3” in most cases, and frame depth is a minimum of 5”. Glass and glass thickness may vary. Doors can be customized to suit the architect’s concept.
Extruded aluminum doors and frames are similar in structural appearance to formed stainless or bronze doors. Aluminum extrusions are, of course, used in place of formed metal, and stiles are internally fastened to top and bottom rails during fabrication. Stile widths are available in 2-1/2’’, 3-1/2’, and 4-1/2’. Top rails are 2-1/2’, 3-1/2’, and 5’. Bottom rail heights are 6’, 7/2’, 10’ or greater with dress plates. Frames are 3” x 5” or 3” x 6”. Glass thickness may vary. These doors can be customized. Offset aluminum frames, which present a dramatic sightline, are available.
EXTRUDED ALUMINUM
Tempered glass doors are "all glass" doors which feature a top and bottom rail which secure the glass to the operating mechanism. Rails can be made in stainless steel, bronze or aluminum. Bronze and stainless rails are a minimum of 4-3/4" in height and standard aluminum are 4-3/4" and 10' in height. 1/2" tempered glass is used for doors up to 9'-0". 3/4" tempered glass is used for doors from 9'-0" to 10'-0". Narrow stile doors are essentially the same as tempered glass doors but feature thin, decorative stile edges. The stiles can be made from clad bronze or stainless steel, or from extruded aluminum. 1/2" tempered glass is used for doors up to 10'-0". Consult factory for taller applications.
Virtually every Ellison Door is a custom door. Ellison has been very successful in meeting unique and unusual architectural requirements which extend beyond Ellison’s primary specification. As examples, doors can be made up to 10’0” or higher in certain applications, and wood doors can be fitted with balanced hardware. Panel doors, flush doors, custom vision lites, unique embellishments, special glass moldings, finishes and exotic metal combinations are all available to the designer. Door operation can be other than balanced including sliders, rolling doors, center pivoted, hinged and curved doors. Ellison has a time honored tradition of working closely with architects to help engineer and fabricate these special requests.
Ellison Balanced Wood Doors are distinctly different from conventional doors. When an Ellison Balanced Door opens, 2/3 of the door swings outward while 1/3 swings inward, thus traveling on an elliptical arc rather than the circular path required by hinged doors. This unique opening motion allows external wind loads to help, rather than hinder, the user. The Ellison Door actually pivots on two arms—located at the top and bottom of the door—which are welded to a pivoting shaft adjacent to the door. The shaft is connected in the frame header to a concealed hydraulic checking device, and is connected at the base to a geared floor box adjacent to the threshold. The shaft contains a torsion bar spring which provides the closing force for the door. The overhead hydraulic check and guide assembly guides the door as it opens and provides adjustable, timed closing speeds.
Several years ago, we inaugurated a new warranty program which was unique in the custom door industry. Instead of limiting our warranty to one part of the door or another, we warrant the entire product manufactured in our plant. This is a plain English agreement reprinted here unedited: Ellison Bronze warrants materials used in its doors, frames and closing hardware, and the fabrication of the above items against defect in material or workmanship for a period of ten years from the date of acceptance of the completed Ellison product. During the ten year period of warranty Ellison agrees to repair, correct or replace any defective material or workmanship within reasonable time after receipt of written notice of such defect from the architect, owner or buyer. All labor to replace warranted parts is by others. This warranty does not cover the surface discoloration of copper alloy sheets or extrusions, the breakdown of protective coatings when furnished to the architect's specification and applied as directed, or to adjustments made necessary by the shifting or settling of the building structure. This warranty does not apply to door pull locks or other hardware not originally manufactured by Ellison. All finished hardware and material not fabricated by Ellison is to carry the manufacturers standard warranty.