

**ARCHITECTURAL SPECIFICATION: DOOR HARDWARE PRODUCTS****DESIGN INTENT: CONCEALED HINGES FOR SWINGING DOORS****PART 1 – GENERAL**

Operable swinging doors shall be provided for interior or exterior walls where shown on Drawings. These hinges have available added self-closing and/or hold-open functions. Each operable door shall be controlled by a handle mechanism to be specified separately.

**PRODUCT MANUFACTURER**

Basis of Design: “FFI Concealed Hinges” by Functional Fenestration Inc [www.fenestration.net](http://www.fenestration.net) .

Listing of acceptable manufacturers: Functional Fenestration Inc [www.fenestration.net](http://www.fenestration.net) .

**REQUIREMENTS FOR SCOPE OF WORK, PROJECT CONDITIONS, QUALITY ASSURANCE, WARRANTY****PART 2 – PRODUCTS****HINGES AND PIVOTS****Product Data: FFI fully adjustable concealed hinges**

- Material: investment cast 304-grade stainless steel.
- For Door capacity: up to 264 lbs (120 kg) and also 352 lbs (160 kg).
- For Door types: wood, steel, or aluminum doors and frames; flush or rabbeted.
- Wood doors: 1.26" (32mm) min thickness. Metal doors: 1.10" (28mm) min thickness.
- Clad doors: for cladding 4-12mm, up to 16mm with chamfered edge, maximum door weight 300kg; meets Fire Rated requirements BS EN 1634.
- Adjustability: 3D adjustments for height, compressions (to frame), and side (to plumb the door).
- Hinges support sound insulation.
- Self-closing hinge option eliminates need for surface-mount door closer.
- Self-closing hinge option applies the closing force evenly on same axis with the hinges (in contrast to surface-mounted closers which can cause out-of line racking force on the door).
- Soft-close hinge employs hydraulic function with constant rate of speed in closing (adjustable closing range of 3-5 seconds).
- Hold-open hinge can be used on the same door as self-closing hinge.
- Hold open hinge also functions as a stop (i.e. after opening degree is set, it won't open past that point).
- Hold open range: 75-180 degrees.
- Finishes: Standard Matte Black US19 and Satin Stainless Steel US32D, and many other special order finish color options are available, including titanium coating with hardness 9H.
- Warranty: 2 years, by Weider Architectural Metals.

**Product Specifications:****Heavy duty – 264 lbs (120 kg) – Premium hinge**

- Heavy duty - Standard hinge UL rated 3DX-120-UL
- Heavy duty - Hold open 3DX-120-HO
- Heavy duty - self-closing - 60 kg force 3DX-120-SC60
- Heavy duty - self-closing - 80kg force 3DX-120-SC80
- Heavy duty - self-closing - 120kg force 3DX-120-SC120

**Extra heavy duty – 352 lbs (160 kg) – Premium Hinge**

- Extra heavy duty- Standard hinge UL rated 3DX-160-UL
- Extra heavy duty - Hold open 3DX-160-HO
- Extra heavy duty - Self closing - 80kg 3DX-160-SC80
- Extra Heavy duty - self-closing - 120kg force 3DX-160-SC120
- Extra Heavy duty - self-closing - 160kg force 3DX-160-SC160

**Glass doors - 220 lbs (100 kg) – Premium hinges**

- Heavy duty - Standard hinge 2DX-100
- Heavy duty - Hold open 2DX-100-HO
- Heavy duty - self-closing - 60 kg force 2DX-100-SC60
- Heavy duty - self-closing - 80kg force 2DX-100-SC80
- Heavy duty - self-closing - 100kg force 2DX-100-SC100

**Clad doors – wood and metal material with cladding**

- Cladding up to 9mm, max door weight 200kg 3DX-200-OF-XXX
- Cladding up to 16mm, max door weight 300kg 3DX-300-OF-SST

**PART 3 – DESIGN EXECUTION**

- Site preparation methods for concealed hinges include ensuring that rough openings are plumb and level for proper installation and operation, and following all recommendations in catalog and installation guide.
- Each operable door shall be controlled by a handle mechanism to be specified separately, with optional locking keyed cylinder.
- Proper maintenance will protect finish durability; avoiding abrasive cleaners, brushes, steel wool, & chemicals to prevent surface corrosion.
- Stainless steel is corrosion-resistant, not corrosion-proof. Deposits such as flash rust may occur due to airborne contaminants. Therefore recommended preventive maintenance is to clean at least monthly using non-abrasive stainless steel cleaner, and to rub twice annually with a coating of Boeshield T-9 or lemon oil.
- Clean hardware and tracks at least every 90 days with water, mild soap, and wipe dry with a soft cloth, in order to maintain warranty and proper function. Do not use steel wool, wire brushes, or similar abrasive tools.