

## REASONS TO CHOOSE DAWSON DOORS

- **Superior door construction-**
  - Dawson is the ONLY one that designs their door construction with a **tubular “interlocking”** structural sub-frame welded within their door (NO face welds).
  - Doors are constructed of 13 gauge/.09” thick material as clad type construction is excluded
- **Offers Several Door Series-**
  1. Custom series (13 gauge/ .09 inch (2 mm) thick)  
*\* Formed in exterior glass stops with removable interior stops mitered to hairline corners/door bodies shall be blanked out from one sheet of metal and shall have no visible seams. NO welding is performed on face of doors.\* (offers a ten (10) year warranty)*
  2. Standard series (.09 inch (2 mm) thick)- (Corner Sample)  
*\* Applied brake-formed glass stops (no exposed fasteners)/door bodies shall be **blanked out** from one sheet of metal and shall have no visible seams. NO welding is performed on face of doors.\* (offers a ten (10) year warranty)*  
*Note: excluding #8 Mirror Polish finish and commercial bronze*
  3. Rugged series (.125 inch (3 mm) thick)- Heavy Duty  
*\* Applied brake-formed glass stops (no exposed fasteners)/door bodies shall be **blanked out** from one sheet of metal and shall have no visible seams. NO welding is performed on face of doors.\* (offers a fifteen (15) year warranty)*  
*Note: excluding #8 Mirror Polish finish and commercial bronze*
- **Offers Selection of Frame to meet a look-**
  1. Custom series (13 gauge/ .09 inch (2 mm) thick)  
*\*Fully Welded construction with welds ground smooth and blended to be indistinguishable in finished work giving a “seamless” look.*  
*Note: with frames that have sidelights or transom there will be field splicing required.*

***Dawson design incorporates the ease of installation and warranty accepted in the industry while reaching new levels of quality in design and durability.***

## **PRODUCT COMPARISON – BALANCED DOORS** **DAWSON DOORS vs. ELLISON BRONZE**

***Each balanced door company has their own balanced door system which basically uses their own balanced hardware. Balanced hardware is specific to the manufacturer who makes them. Meaning none are interchangeable with the other.***

### **BALANCED DOOR ARMS:**

- Both Manufacturers produce one piece cast arms and door pivots.
- Dawson manufactures both stainless steel and bronze castings to match the door material
- Ellison uses only bronze castings.

#### **ARM BEARINGS:**

- Dawson uses self-aligning needle bearings in all door pivots
- Ellison uses plastic sleeve bearings.

#### **HINGE SHAFT:**

- Dawson uses a 1.9" diameter steel tube with 3/16" minimum wall section.
- Ellison uses a 1.75" steel tube with the same wall section.
- Both manufacturers weld the tube to the arms.

#### **GUIDE BOX:**

- Dawson guide box is made of one piece cast 304 stainless steel
  - ✓ The 304 stainless is 50% stronger, more than twice as hard, and will not discolor due to corrosion.
  - ✓ The Dawson guide box has a larger cross sectional area for strength, and incorporates a trim plate to match the frame material.
- Ellison guide box is made of one piece cast bronze.

#### **CHECKING UNIT:**

- Dawson utilizes an LCN 4040 check mechanism made of cast iron and warrants it for 10 years.
  - ✓ The physical characteristics of cast iron make it a superior material for use in a check mechanism.
  - ✓ LCN is considered the best manufacturer of checking devices in the world and have been thoroughly tested and approved in the industry.
- Ellison builds their check mechanism from cast bronze and warrants it for 10 years.

#### **SPRING TENSION ADJUSTMENT:**

- The Dawson product has all the controls for spring tension, swing speed and latch speed protected in the header.
- The Ellison product has a gear box located below the threshold grade for spring tension adjustment.

#### **DAWSON POWER OPERATED DOOR SYSTEM:**

##### **A. Power Operation:**

1. The concealed power operator and specified actuators and/or safety devices shall be provided by the door manufacturer as part of a door unit package (unique to the balanced door system). The operator shall be concealed within the 7-1/2" high x 6" deep door header and mounted to the door by means of a steel arm and aluminum guide track. The arm will be equipped with a mechanical device which will, in the case of extreme force, "sheer" thus protecting any internal mechanical components from damage in the case of abuse. The operator will serve as a manual door closer in the direction of swing with or without electrical power. Operator can be adjusted to lower the open forces when used manually. Power Assist will be active only while pushing or pulling the door and will allow the door to close to close when an opening force is no longer applied to the door.
  - a. Record 8100 operator is an electro-mechanical operator, powered by 24 volt, 1/4 HP motor. When signaled to open, the door shall be opened at the operator-adjusted opening speed. Before the door is fully open at back check, it slows automatically to low speed. The motor stops when the selected door opening angle has been reached. The open position is held by the motor. If an obstruction is detected while opening, it will either stop or reverse (field selectable). POWER CLOSE: Closing shall be provided by means of a spring and motor. When the hold open time has elapsed, the operator will close the door automatically, using spring force and motor. The door will slow to low speed at latch check before it reaches the fully closed position. The door is kept closed by spring power or extended closing force by the motor. NORMAL CLOSE: Closing shall be provided by means of spring, adjustable tension will be by means of a single screw. The microprocessor controlled unit shall control the operation and switching of the swing power operator. The microprocessor control to provide low voltage power supply for all means of actuation. No external

or auxiliary low voltage power source will be allowed. The controls include time delay for normal cycle. Note: NO micro switches are permitted.

- b. Push Plate Actuator Switches are stainless steel 6 inch (152 mm) round wall mounted push plate actuator switch engraved with either handicap insignia and/or "press to open".
  - 1) Optional wireless transmitter that eliminates routing control wires.
- c. Electrical: requirements for work specified in others sections. The general or electrical contractor shall furnish and install 120 VAC, 60 cycle, 1 phase, 15 AMP service to the operator. Two (2) low voltage wires shall be furnished to connect each of the push plate actuator switches and key switches to the operator.

*(The following are optional items, if desired)*
- d. S.M.A.R.T. panel LCD display: Will display the current status of the operator, any faults that the control sees and if required display a screen giving contact details for fault notification.
  - 1) Optional wireless transmitter that eliminates routing control wires.
- e. Battery back-up: Accessibility and convenience at non-fire rated opening under power failure. The minimum size Uninterrupted Power Supply (UPS) should be rated at 1500VA.

- ***The balanced door manufacturer cannot just use any power operator with their balanced door system. This is because each manufacturer's design is based on the size and location of the balanced hardware within the door header along with the power operator. Meaning how it all fits within the header. As both need to function as a power operated door (when needed) with the beauty of it being allowed to function as a manual balanced door (as balanced doors were intended). All manufacturers incorporate a custom made drive arm from the power operator; which is specifically designed for their power operated balanced door system.***
- ***The Dawson/Record system functions seamlessly between auto and manual use. When used as a manual door the power operator will give a gentle assist but not over power the user and return the door to the closed position when complete. This is an advantage in high wind or stack pressure situations.***
- ***Dawson power operated balanced door system incorporates the Record 8100 power operator with microprocessor control. This system requires a 7-1/2' high x 6" deep door header and 3" wide x 6" deep vertical hinge jambs to house the concealed power operator and the balanced hardware. Dawson factory installs and configures the operator within their larger header.***