



## Online Photo Gallery

When you visit the [crlaurence.com](http://crlaurence.com) home page you can click into photo galleries of finished projects. It's a great way to show your customers what can be accomplished when they specify CRL Architectural Hardware Products.





Premium Series Balanced Door



## Balanced Doors and Entrances

- Neutralizes Wind and Stack Pressure for Easy Operation
- Requires Less Operating Space Than Conventionally Hinged Doors
- Two Styles Available; Concealed Vertical Tube and Exposed Vertical Tube
- "Barrier Free Door"; Meets A.D.A. Requirements Without Power Operators
- Available for Our 451, IT451, IG500, IG600, and IT600 Storefront Systems
- Custom Engineered and Fabricated Systems With Over 40 Years of Proven Performance
- Manufactured to Withstand the Most Demanding Design Requirements
- Provides Strength and Durability Throughout Years of Heavy Use
- Fast Turn-Around Times
- For Doors Weighing Up to 700 Pounds (318 kg)
- Automatic Operators Available With Premium Series Only
- 10 Year Warranty

CRL-U.S. Aluminum introduces the latest edition to our extensive Architectural Hardware line, Balanced Doors. We now offer a complete line of Balanced Doors utilizing the high performance hardware as designed by Wikk Industries, a leading manufacturer of Balanced Doors for over 40 years.

Our new line of Balanced Doors and Entrances offers a variety of options that fit within everyone's budget. All are available in a wide variety of styles and finishes, as well as custom finishes to meet your every need.

Balanced Door Hardware, combined with our Door Line, allows us to offer you endless possibilities in design, finish, and functionality. We have applied our strict manufacturing standards, which you have come to know and trust over the years, to the Wikk Balanced Door and Hardware line to ensure the high quality, performance, and durability of the Wikk product continues. Keeping our commitment to customer service, we offer complete engineering and design services, as well as the best lead times in the industry.

When using our IG500, IG600, and IT600 Series Storefronts, Premium Series Balanced Doors are also available with an automatic operator. This is a Standard Balanced Door during manual operation, and automated with power only when required, accomplished using a concealed low energy Stanley Magic-Force™ Motorized Operator.

For additional information, contact U.S. Aluminum Technical Sales at (800) 262-5151 in the U.S. and Canada, or (323) 268-4230 International. Ask for Ext. 5305. You can e-mail us through our web site at [usalum.com](http://usalum.com).

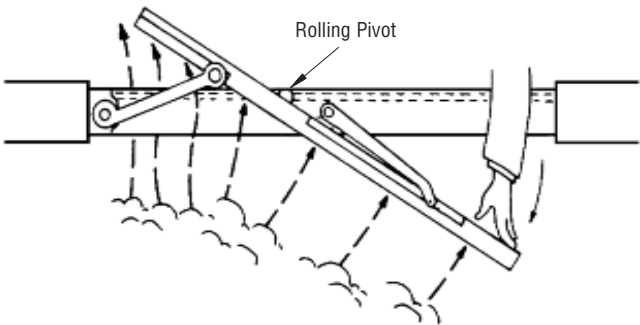
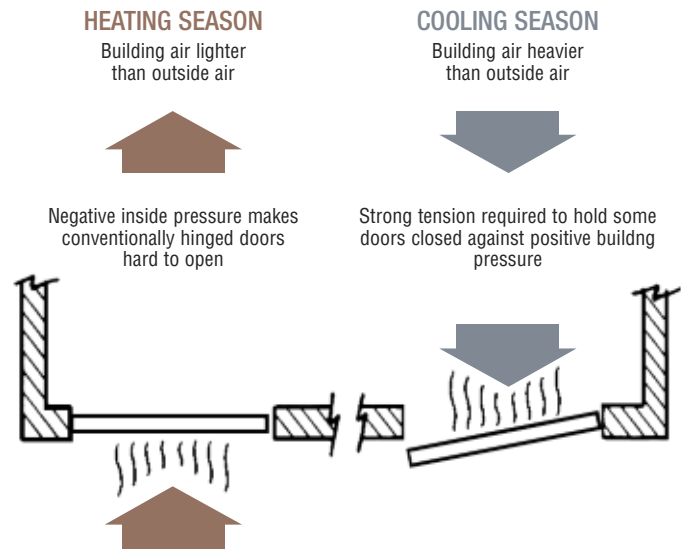
What is a Balanced Door?

In a Balanced Door the door panel rotates around a rolling pivot in an elliptical path to provide the widest possible opening with the smallest swing arc (see diagram below). This design neutralizes two naturally occurring pressures, atmospheric (wind) and interior stack pressure, allowing effortless opening and positive closing. Balanced Doors are typically required when a commercial project has a monumental entrance, requiring an oversized, heavy door. The 'balanced' principle permits the use of these monumental doors where ordinary closer mechanisms would fail to offer adequate control.

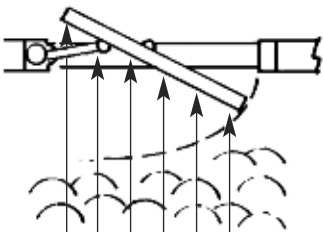


Let Stack Pressures Work for You

Balanced Door Design Offers Many Advantages

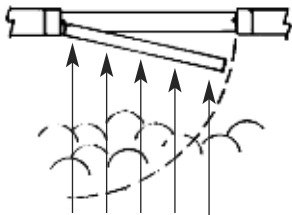


When our Balanced Doors open, approximately two thirds of the door swings outward while one third swings inward, allowing wind or stack pressure to assist rather than hinder the operation of the door. Air pressure balances itself out around the rolling pivot, so less force is needed to operate the door.



Balanced Door

WIND	BALANCED DOOR WITH 5 LBS. SPRING PRESSURE	REGULAR DOOR WITH 5 LBS. SPRING PRESSURE
m.p.h.	lbs. pressure to open	lbs. pressure to open
10	1 + 5 = 6 lbs.	3 + 5 = 8 lbs.
20	3 + 5 = 8 lbs.	11 + 5 = 16 lbs.
30	7 + 5 = 12 lbs.	26 + 5 = 31 lbs.
40	13 + 5 = 18 lbs.	47 + 5 = 52 lbs.
50	21 + 5 = 26 lbs.	73 + 5 = 78 lbs.
60	30 + 5 = 35 lbs.	105 + 5 = 110 lbs.



Regular Door



The door pivots on two single-piece cast bronze or stainless steel arms located at the top and bottom of the door. These are attached to a pivoting hinge tube that runs the entire height of the door. The hinge tube contains a torsion bar that provides the closing force for the door, and is connected to a hydraulic checking device located in the header, and a tension adjusting gear box at the sill.







## CRL Balancer™ Extruded Aluminum Standard Balanced Doors and Frames



- Affordable for Budget-Sensitive Jobs
- 6063-T5 Alloy Available in Clear or Dark Bronze Anodized and Powder Coat, Newlar, and Kynar Finishes
- Cladding Options Available in Polished, Brushed, and Non-Directional Stainless Steel or Bronze; and Oil Rubbed Bronze
- Exposed or Concealed Vertical Tubes
- Maximum Door Size is  
48" Wide x 108" High (1219 x 2743 mm)

CRL Balancer™ Extruded Aluminum Standard Balanced Doors and Frames are available for budget-sensitive projects. These doors and frames offer the look of a Formed Monumental Door at the cost of a clad aluminum door. All our aluminum doors are blocked and welded to provide long-lasting performance and durability. CRL offers narrow, medium, and wide stile doors with a minimum bottom rail height of 6" (152 mm).

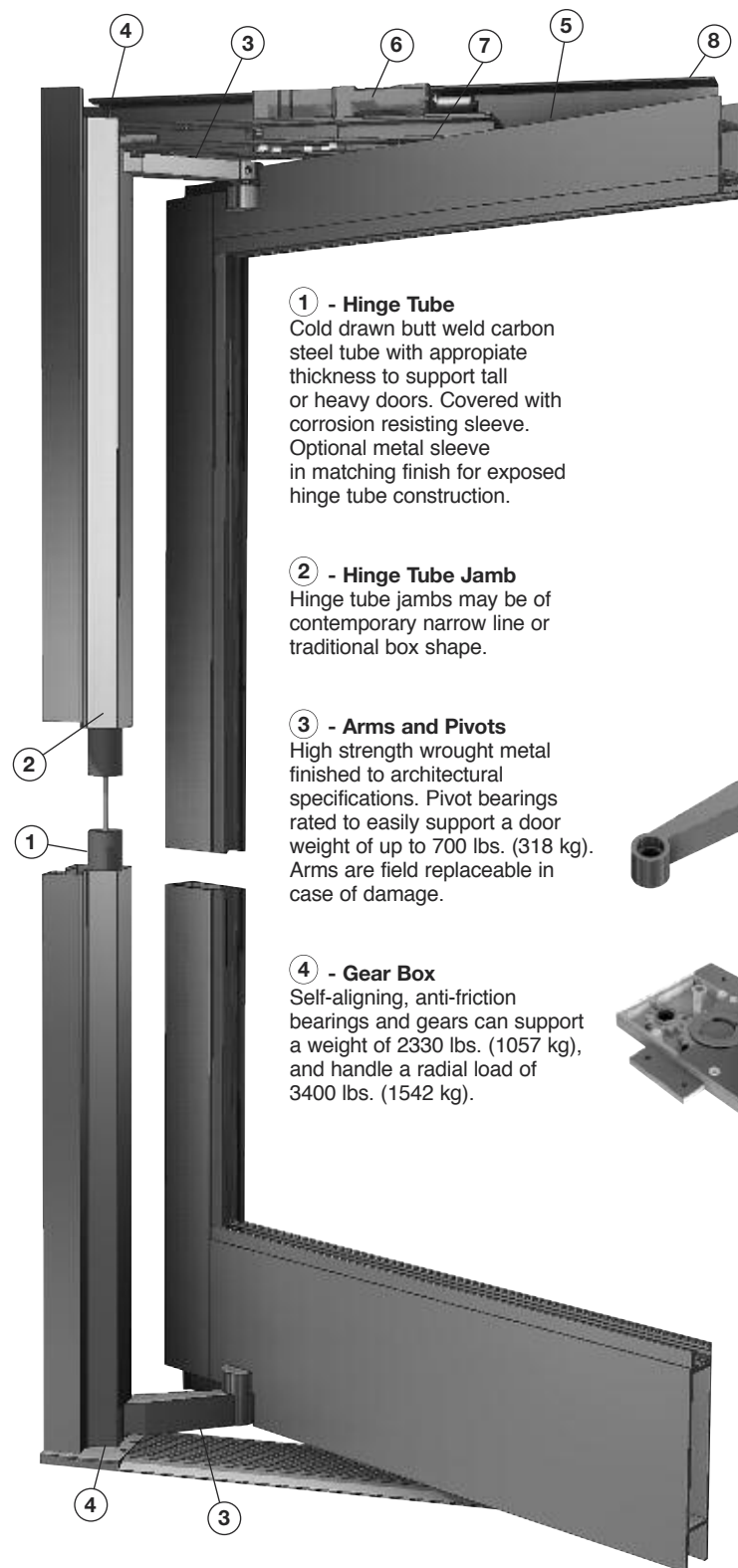
## CRL Balancer™ Heavy Glass Balanced Doors and Frames

- Available With or Without Mini Vertical Stiles
- Available With 4", 6" or 10" (102, 152 or 254 mm) Tall Square Profile Door Rails
- Six Standard Architectural Finishes, With Custom Finishes Available
- Glazed Using Expansion Cement Technology
- Maximum Door Size is  
48" Wide x 108" High (1219 x 2743 mm)

CRL Balancer™ Heavy Glass Balanced Doors and Frames come completely glazed with either 1/2" or 3/4" (12 or 19 mm) fully tempered glass, and are available with or without mini vertical stiles. 4" (102 mm) or 6" (152 mm) rails top and bottom are required with optional 10" (254 mm) bottom rails to meet A.D.A. codes for framed doors. Balanced Door packages are available with concealed or exposed vertical tubes and are 'install ready' when shipped. There is no additional cutting or prepping required, simply install the header or frame and hang the pre-glazed door panel(s), make a few quick adjustments, and you are done.



## Anatomy of a Balancer™ Series Balanced Door



### ① - Hinge Tube

Cold drawn butt weld carbon steel tube with appropriate thickness to support tall or heavy doors. Covered with corrosion resisting sleeve. Optional metal sleeve in matching finish for exposed hinge tube construction.

### ② - Hinge Tube Jamb

Hinge tube jambs may be of contemporary narrow line or traditional box shape.

### ③ - Arms and Pivots

High strength wrought metal finished to architectural specifications. Pivot bearings rated to easily support a door weight of up to 700 lbs. (318 kg). Arms are field replaceable in case of damage.

### ④ - Gear Box

Self-aligning, anti-friction bearings and gears can support a weight of 2330 lbs. (1057 kg), and handle a radial load of 3400 lbs. (1542 kg).

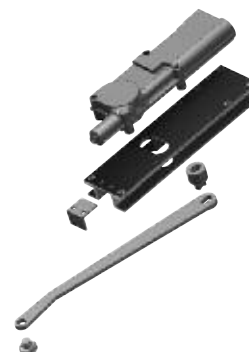
### ⑤ - Balancing Guide Roller

Rigidly mounted, yet self aligning to overcome any misalignment between door and frame. Sturdy and maintenance free.



### ⑥ - LCN Hydraulic Check

Completely concealed in the header. Dependable and easy to adjust without removing hardware or covers. A hydraulic back check cushions the limiting point of the door swing.



### ⑦ - Concealed Connecting Arm

Wrought metal arm connected directly to door to provide a strong, triangular positive stop at 90 degree opening and prevent stress at the header to jamb connection. Constant check control avoids abrupt rebounding of door.

### ⑧ - Compact Header

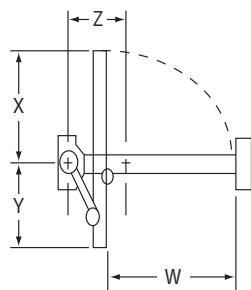
Header with integral guide roller track, requires only 2-3/4" x 4-1/2" (70 x 114 mm) above door to house the LCN Hydraulic Check.

## Advantages of the Balancer™ Series Balanced Doors By CRL



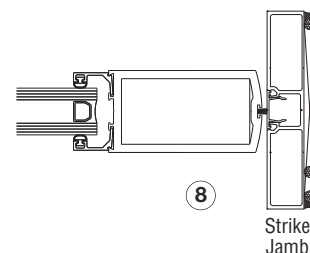
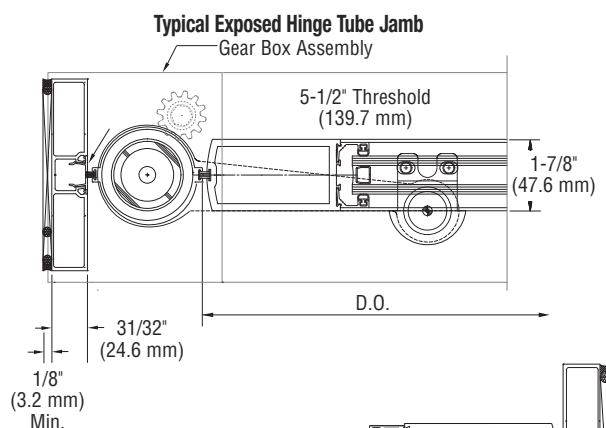
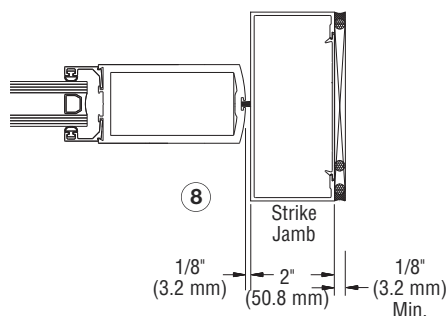
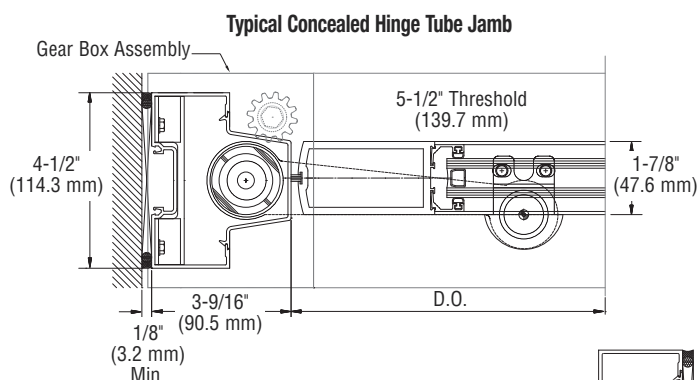
- Cost Effective Alternative to Standard Entrance Doors
- Maximum Size for Balancer™ Series is 48" Wide x 108" High (1219 x 2743 mm)
- Lets Wind and Stack Pressures Work for You Instead of Against You
- Assures Easy Operation and Positive Closing, Even Under Adverse Conditions
- Designed With Dependable LCN Hydraulic Check Connected Directly to Door
- Adjustable Hydraulic Back Check for Consistently Smooth Operation
- Latching Speed, Closing Speed, Back Check, and Spring Power are All Adjustable Without Removing Hardware or Covers
- Compact Header With Integral Guide Track
- Requires Less Operating Space Than Conventionally Hinged Doors
- Hardware is Fully Capable of Supporting and Controlling Large and Monumental Doors
- Easily Installed in New or Remodeled Buildings, Exterior or Interior

### Design Dimensions (shown in inches)



	SHORT ARM						LONG ARM					
Door Size	30"	32"	34"	36"	38"	39"	40"	42"	44"	46"	48"	
W	26-11/16"	28-11/16"	30-11/16"	32-11/16"	34-11/16"	35-11/16"	36-11/16"	38-11/16"	40-11/16"	42-11/16"	44-11/16"	
X	17-1/2"	19-1/2"	21-1/2"	23-1/2"	25-1/2"	26-1/2"	24"	26"	28"	30"	32"	
Y	12-1/2"						16"					
Z	7-1/8"						8-7/8"					

## The Balancer Series Typical Details





## CRL Premium Series Formed Bronze Monumental Balanced Doors and Frames

**BLUMCRAFT®**

A DIVISION OF C.R. LAURENCE CO., INC.

- Alloy 464 Naval Bronze
- Available in Polished, Brushed, Non-Directional and Oil Rubbed Finishes
- Available in Fully Framed or Tempered Heavy Glass Doors
- Standard 'Crisp' Corner Construction
- Ribbon Accent Lines and Custom Infill Shapes Available
- Automatic Operator Available
- Maximum Door Size is 50" Wide x 120" High (1270 x 3048 mm)

CRL Premium Series Formed Bronze Monumental Balanced Doors and Frames are constructed using 'V-Groove' Technology to produce 'crisp' corners and tight joints. 14 gauge alloy 464 Naval Bronze is used to ensure structural integrity and long-lasting performance. Stile width is 2" (51 mm) with a minimum top rail height of 3-1/2" (89 mm) and a minimum bottom rail height of 6" (152 mm). All doors are custom made for your particular project so we can provide you with endless combinations of sizes to meet your design.

## CRL Premium Series Formed Stainless Steel Monumental Balanced Doors and Frames

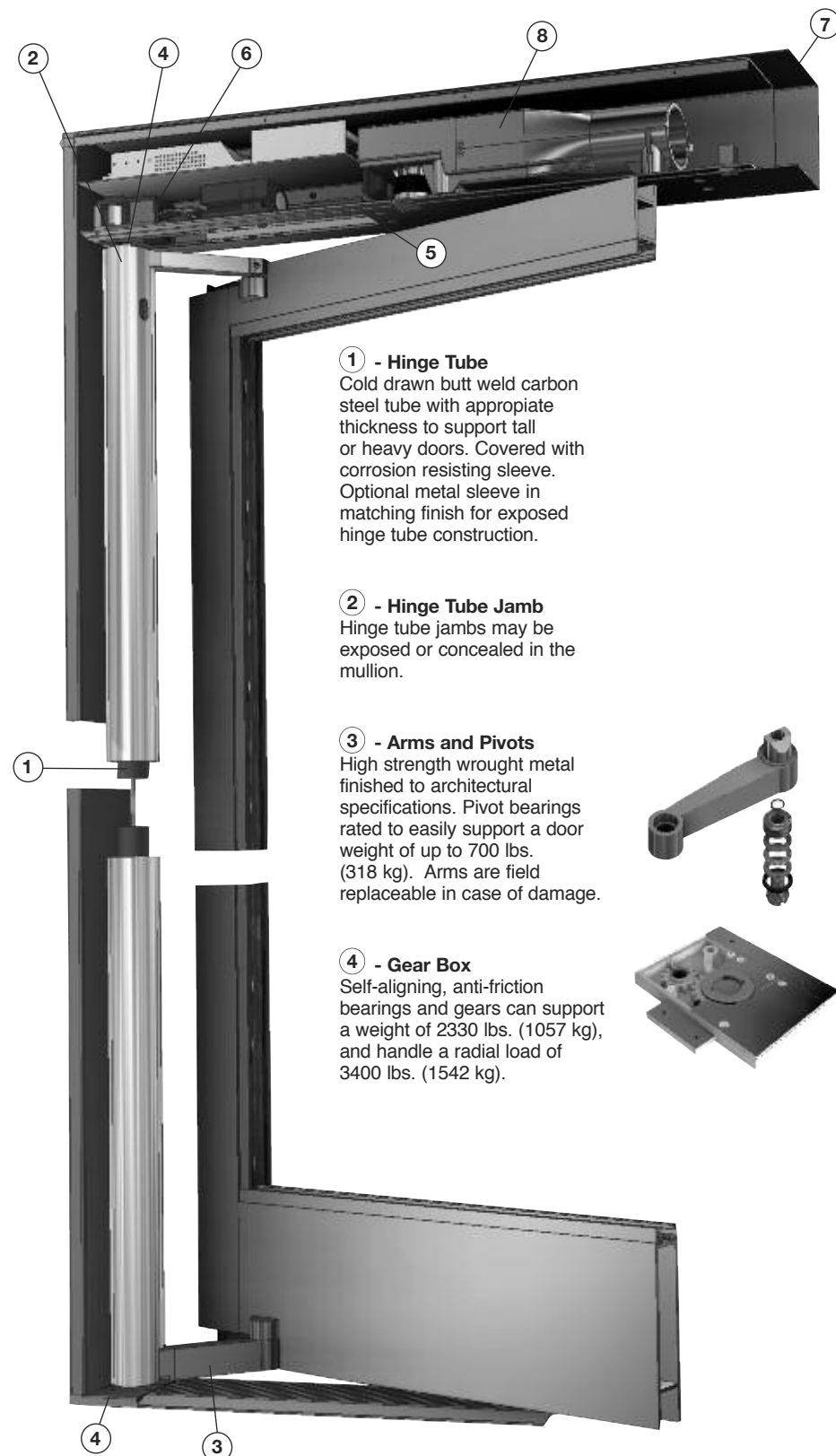
- Alloy 304 or 316 Stainless Steel
- Available in Polished, Brushed and Non-Directional Finishes
- Available in Fully Framed or Tempered Heavy Glass Doors
- Standard 'Crisp' Corner Construction
- Ribbon Accent Lines and Custom Infill Shapes Available
- Automatic Operator Available
- Maximum Door Size is 50" Wide x 120" High (1270 x 3048 mm)

CRL Premium Series Formed Stainless Steel Monumental Balanced Doors and Frames are constructed from 14 gauge alloy 304 or 316 stainless steel to ensure structural integrity and long-lasting performance. Our 'V-Groove' Technology produces 'crisp' corners and tight joints. With our laser cutting capabilities we can produce practically any infill panel or overlay you may desire. Stile width is 2" (51 mm) with a minimum top rail height of 3-1/2" (89 mm) and a minimum bottom rail height of 6" (152 mm). Since all doors are custom made for your project, we can accommodate a wide array of sizes and designs.





## Anatomy of a Premium Series Balanced Door



**BLUMCRAFT®**  
A DIVISION OF C.R. LAURENCE CO., INC.

### ① - Hinge Tube

Cold drawn butt weld carbon steel tube with appropriate thickness to support tall or heavy doors. Covered with corrosion resisting sleeve. Optional metal sleeve in matching finish for exposed hinge tube construction.

### ② - Hinge Tube Jamb

Hinge tube jambs may be exposed or concealed in the mullion.

### ③ - Arms and Pivots

High strength wrought metal finished to architectural specifications. Pivot bearings rated to easily support a door weight of up to 700 lbs. (318 kg). Arms are field replaceable in case of damage.

### ④ - Gear Box

Self-aligning, anti-friction bearings and gears can support a weight of 2330 lbs. (1057 kg), and handle a radial load of 3400 lbs. (1542 kg).

### ⑤ - Balancing Guide Roller

Rigidly mounted, yet self aligning to overcome any misalignment between door and frame. Sturdy and maintenance free.



### ⑥ - Cast Bronze Hydraulic Check

Completely concealed in the header. Has first and second speed adjustment. Removable without requiring the removal of the door.



### ⑦ - Compact Header

Header with integral bronze guide roller track, requires only 2-3/4" x 5-1/2" (70 x 140 mm) above door to house the Hydraulic Check.



### ⑧ - Optional Stanley Magic-Force™ Motorized Operator

Heavy-duty (low energy) concealed overhead electromechanical power operator with control box, conforming to ANSI/BHMA A156.19. Motor permanent magnet, DC 3/16 HP (minimum), 1.25 AMP, 120V AC, UL listed. Adjustable slow opening speed and adjustable time delay. Requires 5-1/2" x 6" (140 x 152 mm) header to house power operator.



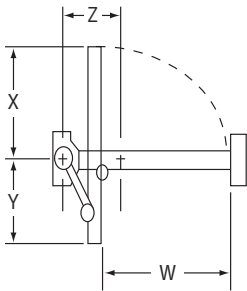
Advantages of the Premium Series  
Balanced Doors By CRL



- Hardware is Fully Capable of Supporting and Controlling Large and Monumental 2" (51 mm) Thick Doors
- Maximum Size for Premium Series is 50" Wide x 120" High (1270 x 3048 mm)
- Lets Wind and Stack Pressures Work for You Instead of Against You
- Assures Easy Operation and Positive Closing, Even Under Adverse Conditions

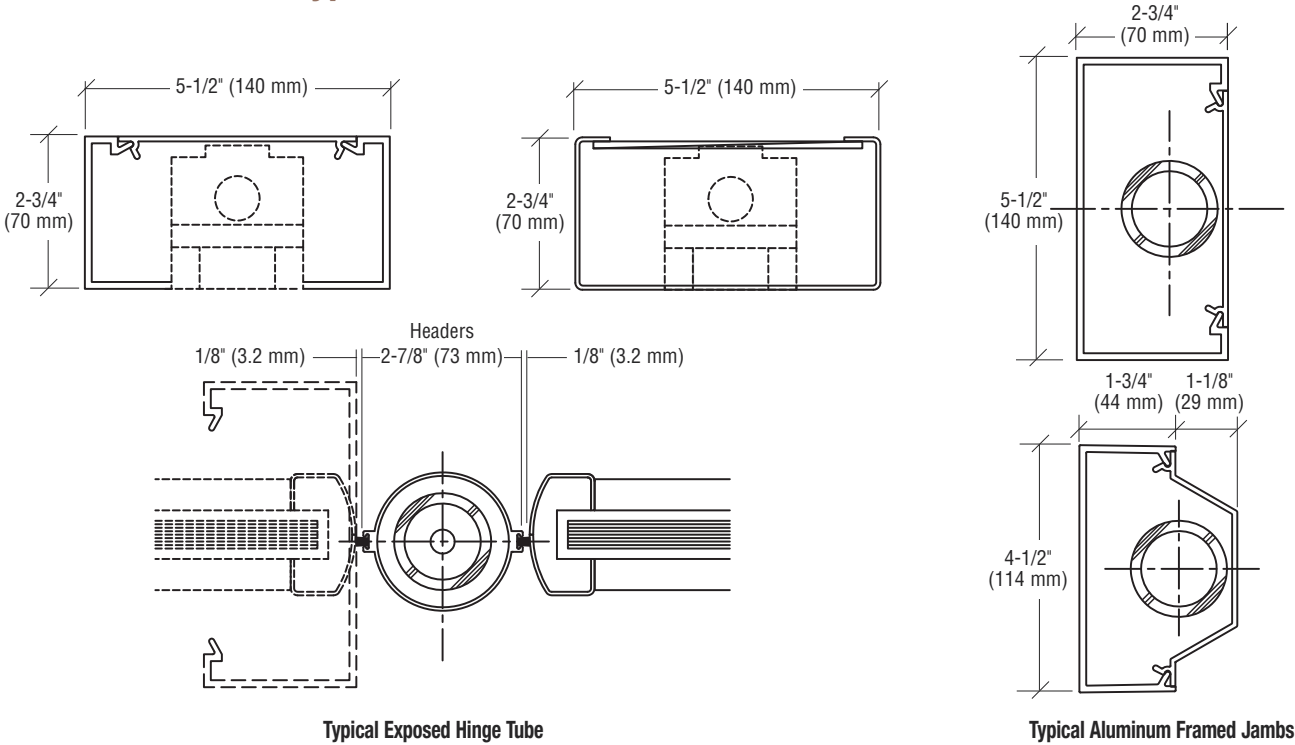
- Adjustable Bronze Cast Hydraulic Back Check for Consistently Smooth Operation
- Latching Speed, Closing Speed, and Spring Power are Adjustable Without Removing Hardware or Covers
- Compact Header With Integral Guide Track
- Requires Less Operating Space Than Conventionally Hinged Doors
- Easily Installed in New or Remodeled Buildings, Exterior or Interior

Design Dimensions (shown in inches)



	SHORT ARM						LONG ARM				
Door Size	30"	32"	34"	36"	38"	39"	40"	42"	44"	46"	48"
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Y	— 12-1/2" —						— 16" —				
Z	— 7-1/8" —						— 8-7/8" —				

The Premium Series Typical Details



## Making Dreams and Visions a Reality

CRL has lifted Tajima to a new level of excellence in the world of custom doors and entrances. We have combined Tajima's vision and experience with our state of the art manufacturing processes and engineering to be able to produce just the right creation for your most important openings.

Choose Tajima for those projects when one of the standard door and entrance designs available from the largest collection in the industry is just not what you are looking for! Let Tajima help make your dreams and visions into a reality!



## CRL Formed Metal Doors and Entrances

- Custom Designed and Engineered
- Heavy Gauge Stainless Steel, Bronze, Brass, or Exotic Metals
- Crisp 'V' Cut Corners
- Precision Fit at All Corners and Joints



CRL-Tajima Formed Metal Doors and Entrances are manufactured with near flawless lines and surfaces, minimizing "oil canning" and distortion. Each system is adapted to meet the demanding requirements of your project.

Our Formed Metal Doors are made of minimum 16 gauge metal sheet that is formed to the desired shapes and sizes required. Welded construction and reinforcing provides strength and durability throughout years of heavy use.

By forming the individual parts that make up the door itself, we are able to easily make doors of varying design without the cost and lead time of expensive extrusion dies and minimum quantity orders. We can also design around unique hardware combinations that do not normally fit in a standard door.



For additional information or assistance with any CRL-Tajima product contact CRL Technical Sales at (800) 421-6144 in the U.S., (877) 421-6144 from Canada, or (323) 588-1281 International, and ask for Ext. 7700. You can also send an e-mail from the [crlaurence.com](http://crlaurence.com) home page. Click on Contact Us, and then click on Technical Sales for Commercial Products.