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Project: AP Solis Middle School, Donna, TX

Due to the diversity in state/provincial, local, and federal laws and codes that govern the design and application of architectural products, it is the responsibility of the individual architect, owner, and installer to ensure that products selected for use on projects comply with all applicable building codes and laws. U.S. Aluminum exercises no control over the use or application of its products, glazing materials, and operating hardware, and assumes no responsibility thereof.

The rapidly changing technology within the architectural aluminum products industry demands that U.S. Aluminum reserve the right to revise, discontinue or change any product line, specification or electronic media without prior written notice.

NOTE: Dimensions in parentheses () are millimeters unless otherwise noted.

Other metric units shown in this publication are:

m - meter Kg - kilogram

Pa - pascal KPa - kilopascal

MPa - megapascal

Online usalum.com By Phone (800) 262-5151 By Phone (800) 421-6144 Online crlaurence.com



Specifications

Thermal Doors

- Series 250-T
- Series 400-T

SECTION 08 11 16 ALUMINUM DOORS AND FRAMES

SERIES	STILES	TOP RAIL	BOTTOM RAIL	GLAZING INFILL
250-T Narrow Stile	3" (76.2)	2-7/8" (73)	4-5/16" (109.5)	1" (25)
400-T Medium Stile	4-1/4" (108)	4-5/16" (109.5)	7-1/4" (184.2)	1" (25)
A.D.A	. Bottom Rail Optic	on	9-1/2" (241.3)	

I. GENERAL DESCRIPTION

Work Included: The glazing contractor shall furnish all necessary materials, labor, and equipment for the complete installation of aluminum entrance doors, door frames, and hardware as detailed on the drawings and specified herein.

Work Not Included: Structural support of the framing system, wood framing, structural steel, masonry, and final cleaning.

QUALITY ASSURANCE

For purposes of designating type and quality for work in this section, drawings and specifications are based on U.S. Aluminum Series 250-T or 400-T Entrance Doors.

OPTIONAL: Door shall have ADA 9-1/2" (241.3) bottom rail. When substitute products are to be considered, supporting technical literature, samples, and drawings must be submitted 10 days prior to bid date in order to make a valid comparison of the products involved.

II. PRODUCTS MATERIALS

Door members shall be extruded architectural aluminum 6063-T5 alloy and temper and joined together by a rigid thermal barrier. Major portions of all door sections, except glazing beads, shall be nominal .125 (3.2). Wall thickness of frame members shall be nominal .093 (2.4). Screws, nuts, washers, bolts, rivets, and other fastening devices shall be aluminum, stainless steel or other non-corrosive materials.

DOOR CONSTRUCTION

Door stiles and rails shall be aluminum extrusions accurately joined with polyamide strips and heavy concealed reinforcement brackets secured with bolts and screws.

Doors shall have one snap-in glass stop with E.P.D.M. glazing gasket on both sides of the glass. No exposed screws shall be permitted. Each door leaf shall be equipped with an adjusting mechanism, located in the top rail near the lock stile, which provides for minor clearance adjustments after installation. A hard-backed poly-pile weatherstrip shall be installed in both stiles of center hung single doors and in hinge stiles of center hung pair of doors. Offset pivoted or butt hung doors shall have weatherstripped door stops at frame jambs and header. The active meeting stile of all pairs of doors shall have an adjustable astragal with double line of weatherstripping. **OPTIONAL:** Door bottom rail will be weathered with an E.P.D.M. blade gasket sweep strip applied with concealed fasteners. (NOTE: This option is required for high performance conditions.)

OPTIONAL: Door bottom rail shall receive a concealed weatherstripped insert.

HARDWARE

Hardware for aluminum doors and door frames shall be the entrance manufacturer's standard. If custom hardware is to be furnished by others, templates and physical hardware must be submitted prior to any fabrication.

FINISH

All exposed framing surfaces shall be free of scratches and other serious blemishes. Aluminum extrusions shall be given a caustic etch followed by an anodic oxide treatment to obtain...(Specify one of the following).

____#11 Clear anodic coating

___#22 Dark Bronze anodic coating

___#33 Black anodic coating

A Fluoropolymer paint coating conforming with the requirements of AAMA 2605. Color shall be (Specify a U.S. Aluminum standard color).

III. EXECUTION INSTALLATION

All items under this heading shall be set in their correct locations as shown in the details and shall be level, square, plumb and at proper elevation and in alignment with other work in accordance with the manufacturer's installation instructions and approved shop drawings. All joints between entrance framing and the building structure shall be sealed in order to secure a watertight installation. Upon completion of the installation of the entrances, it shall be the contractor's responsibility to make all necessary final adjustments to attain normal operation of each door and its mechanical hardware.

PROTECTION AND CLEANING

After installation the General Contractor shall adequately protect exposed portions of the aluminum entrance work from damage by grinding and polishing compounds, plaster, lime, acid, cement or other contaminants. The General Contractor shall be responsible for final cleaning.



Technical Data

Thermal Doors

• Series 250-T

Series 400-T

Our Series 250-T and 400-T Thermal Entrances offer a two glass stop design, Polyamide Nylon Thermal Break, and mechanically fastened corners, offering one of the best thermal properties available in commercial entrance doors. All doors offer clean lines and are supplied with unique Astral II push/pull hardware and maximum security locks. These entrances can easily accommodate a wide variety of custom hardware for specific job requirements. Optional 9-1/2" (241.3) bottom rail is available for A.D.A. requirements.

STANDARD FEATURES:

Glass Stops - Pressure type glass stop with E.P.D.M. glazing gaskets permit time saving installation of glass. Glass stops are for 1 inch (25) infills. Setting blocks for glass are preset at the factory.

Adjustable Leveling Screw - A simple adjustment on the leveling screw, concealed in the top rail of the door, compensates for minor variances in door openings after installation.

Adjustable Astragal - All pairs of doors come with spring-loaded fully adjustable dual weathered astragals for optimum air resistance. Binding or gaps at the meeting stiles can be easily corrected by simple adjustments. The full length dual weather stripping on the astragal is not interrupted by the deadlock.

ACCESSORIES:

Hinging Hardware

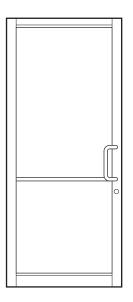
Offset Pivots for single acting doors Butt Hinges for single acting doors

Closers

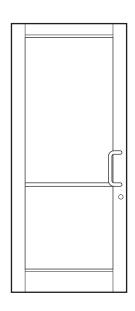
Exposed Overhead (Surface Mounted)
Concealed Overhead with Offset Arm (Series 400-T only)
Floor Mounted

Panic Exit Devices

Conventional Push Panel



Series 250-T (Offset Hung Door Shown)



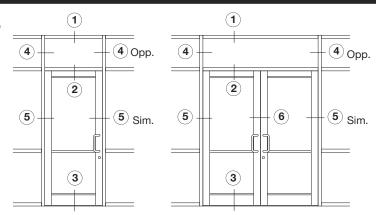
Series 400-T (Offset Hung Door Shown)

SERIES	STILES	TOP RAIL	BOTTOM RAIL	APPLICATION
250-T Narrow Stile	3" (76.2)	2-7/8" (73)	4-5/16" (109.5)	Light to Moderate Traffic
400-T Medium Stile	4-1/4" (108)	4-5/16" (109.5)	7-1/4" (184.2)	Moderate to Heavy Traffic
A.D.A. I	Bottom Rail Optic	on	9-1/2" (241.3)	A.D.A.



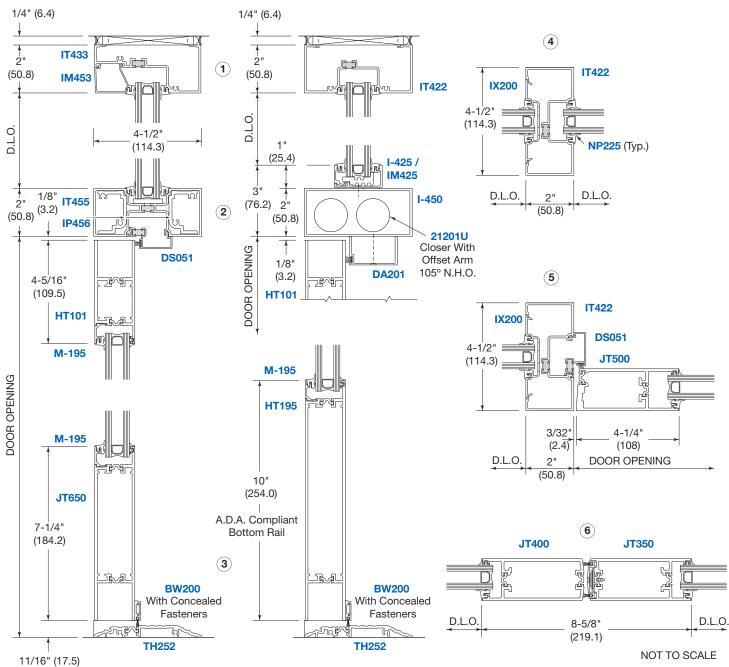
Typical Details

NOTE: Series 400-T Medium Stile Door Shown. For Series 250-T Narrow Stile Door Details, visit **usalum.com**.



Thermal Doors

- Series 250-T
- Series 400-T

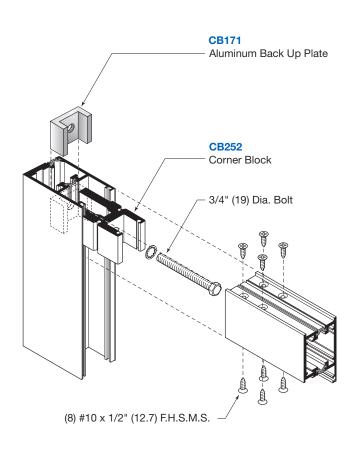


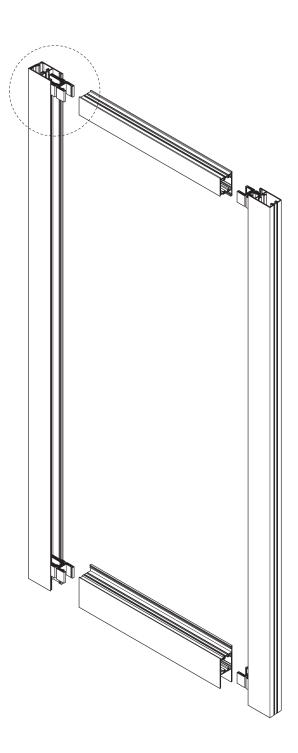
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Door Corner Construction

Thermal Doors • Series 250-T • Series 400-T







Glass Formulas for Doors With Standard and A.D.A. Bottom Rails

Thermal Doors

- Series 400-T
- Series 550-T

GLASS HEIGHT FORMULAS FOR RAIL COMBINATIONS AND SPECIAL HEIGHT DOORS For 400-T Medium Stile Doors **EXAMPLE 1:** 84" Door Opening Height with Butt Hinges or Offset Hinges and 1" (25) Glass: Standard Top Rail and 7-1/4" Bottom Rail with 1/2" Threshold. **FORMULA:** 84" - [11-3/8"] = 72-5/8" Glass Height Size. Top Rail Size **EXAMPLE 2:** 84" Door Opening Height with Butt Hinges or Offset Hinges 1/8" (3) Clearance and 1" (25) Glass: Standard Top Rail and 10" A.D.A. Bottom Rail with 1/2" Threshold. **FORMULA:** 84" - [14-1/4"] = 69-7/8" Glass Height Size. For 550-T Wide Stile Doors Door Opening **EXAMPLE 1:** 84" Door Opening Height with Butt Hinges or Offset Hinges and 1" (25) Glass: Standard Top Rail and 7" Bottom Door 3 Rail with 1/2" Threshold. FORMULA: 84" - [12-3/4"] = 71-1/4" Glass Height Size. **EXAMPLE 2:** 84" Door Opening Height with Butt Hinges or Offset Hinges and 1" (25) Glass: Standard Top Rail and 10" A.D.A. Bottom Bottom Clearance Rail with 1/2" Threshold. (11/16" With 1/2" **Bottom** FORMULA: 84" - [15-3/4"] = 68-1/4" Glass Height Size. Rail Size Threshold) **RAIL SIZES: DOOR CLEARANCES:** HT201 2-7/8" At Top Rail 1/8" HT101 4-5/16" At Bottom Rail 11/16" @ 1/2" Threshold WT200 6"

GLASS WIDTH FORMULAS

DOORS WITH BUTT HINGES OR OFFSET PIVOTS

DOOR STILE		1" (25) GLASS	
Series 400-T	Single Door	Door Opening minus 7-3/4"	
Medium Stile	Pair of Doors Door Opening divided by 2, minus 7-3/4"		
Series 550-T	Single Door	Door Opening minus 10-1/4"	
Wide Stile	Pair of Doors	f Doors Door Opening divided by 2, minus 10-1/4"	

GLASS HEIGHT FORMULAS*

DOOR STILE	1" (25) GLASS WITH STANDARD BOTTOM RAIL	1" (25) GLASS WITH 10" A.D.A. BOTTOM RAIL
Series 400-T Medium Stile	Door Opening Minus 11-3/8"	Door Opening Minus 14-1/4"
Series 550-T Wide Stile	Door Opening Minus 12-3/4"	Door Opening Minus 15-3/4"

* Including 1/2" Threshold

WT100 7" WT195 10"



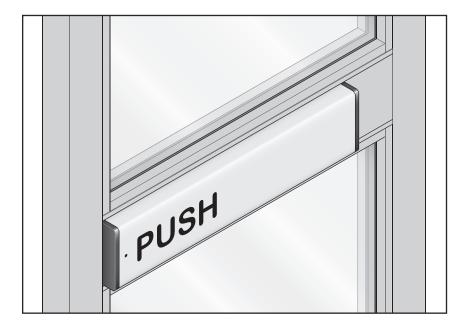
Entrance Door Options



Exit Devices

Mid-Panel Panic

This entrance option is available on the following U.S. Aluminum products:

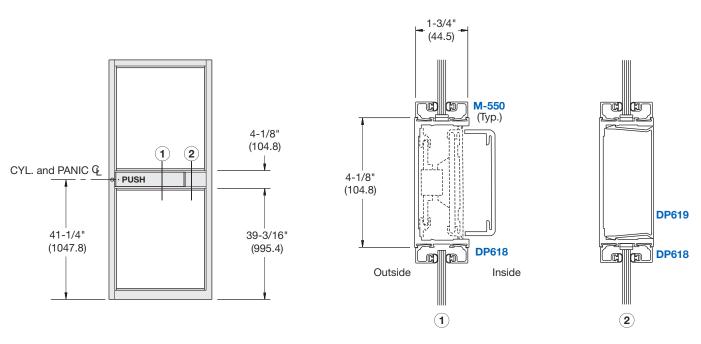


MID-PANEL PANIC COMPATIBLE PRODUCTS

Series 250 Narrow Stile Doors Series 400 Medium Stile Doors Series 550 Wide Stile Doors Series 800 Durafront Entrance Systems Series 850 Durafront Entrance Systems

NOTE: CRL Jackson Brand Panics are the standard. However, if you require Von Duprin® or other brand panics we can supply as requested.

Combining contemporary styling with maximum security features, the Mid-Panel Panic option provides a Concealed Vertical Rod Panic Device with a Touch Bar Actuator. Matching mid-panels without hardware are available for sidelites.



NOT TO SCALE

Von Duprin is a registered trademark of Ingersoll-Rand plc, its subsidiaries and/or affiliates in the United States and other countries.



Entrance Door Options

Panic Exit Devices

VON DUPRIN® 33A/35A SERIES EXIT DEVICE PRODUCTS

- Fits Door Stiles as Narrow as 1-3/4" (44)
 Available With Smooth or Grooved Housing
- Non-Handed
- UL Listed and Tested to ANSI A156.3, Grade 1



VON DUPRIN®

Von Duprin® designs and manufactures Exit Devices to the highest standards of quality and reliability in accordance with U.S. domestic and international standards. All 33A and 35A Series Exit Devices are UL Listed for Panic Exit Hardware, and are tested in accordance to ANSI A156.3, Grade 1 standards. For additional information, contact U.S. Aluminum Technical Sales at (800) 262-5151. You can also visit our web site at usalum.com.



33A Series features a grooved mechanism case



35A Series features a smooth mechanism case

RIM DEVICES

33A GROOVED PART NO.	35A SMOOTH PART NO.	DEVICE LENGTH	FINISH
33AE03626	35AE03626	36" (914)	Satin Chrome
33AE03313	35AE03313	36" (914)	Dark Bronze
33AE04626	35AE04626	48" (1219)	Satin Chrome
33AE04313	35AE04313	48" (1219)	Dark Bronze

Minimum order: 1 each

SURFACE MOUNTED VERTICAL ROD DEVICES

33A GROOVED PART NO.	35A SMOOTH PART NO.	DEVICE LENGTH	FINISH
3327AE03626	3527AE03626	36" (914)	Satin Chrome
3327AE03313	3527AE03313	36" (914)	Dark Bronze
3327AE04626	3527AE04626	48" (1219)	Satin Chrome
3327AE04313	3527AE04313	48" (1219)	Dark Bronze

Minimum order: 1 each.

CONCEALED VERTICAL BOD DEVICES

CONCLARED VENTIONE NOD DEVICES			
33A GROOVED PART NO.	35A SMOOTH PART NO.	DEVICE LENGTH	FINISH
3347AE03626	3547AE03626	36" (914)	Satin Chrome
3347AE03313	3547AE03313	36" (914)	Dark Bronze
3347AE04626	3547AE04626	48" (1219)	Satin Chrome
3347AE04313	3547AE04313	48" (1219)	Dark Bronze

Minimum order: 1 each.



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Entrance Door Options

- Design for Use With 1-3/4" (44) Narrow, Medium, and Wide Stile **Aluminum, Wood, or Hollow Metal Doors**
- Concealed Fastening for Added Security

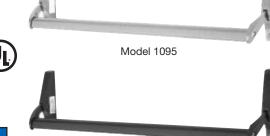
Panic Exit Devices



CRL JACKSON 10 SERIES PANIC EXIT DEVICES

Features:

- Contoured Field Sizeable 48" (1219) Long Crossbar
- Standard Door Height 84" (2134) Extension Available
- Dual Dogging Feature By Outside Cylinder
 - By Dogging Pins on Panic Housing
- Wear Points Insulated by Nylon Sleeves and Rollers





PART NO.	TYPE	HANDING	FINISH
311095LC4628	Rim - 'C' Strike	Left Hand-Reverse Bevel	Satin Aluminum
311095RC4628	Rim - 'C' Strike	Right Hand-Reverse Bevel	Satin Aluminum
311095LC4313	Rim - 'C' Strike	Left Hand-Reverse Bevel	Dark Bronze
311095RC4313	Rim - 'C' Strike	Right Hand-Reverse Bevel	Dark Bronze
31108547628	Concealed Vertical Rod	Non-Handed	Satin Aluminum
31108547313	Concealed Vertical Rod	Non-Handed	Dark Bronze

Minimum order: 1 each

Materials:

Body and Arms: High Tensile Strength

Aluminum

Mechanical Components: Stainless and

Hardened, Plated Steel

Latch and Strikes: Sintered Steel

CRL JACKSON 20 SERIES PANIC EXIT DEVICES

Features:

- Standard 36" (914) Wide Door Field Sizeable up to 48" (1219) Width Available on Special Order
- Standard Door Height 84" (2134) Extension Available
- Concealed Easy to Use Dogging System Optional Cylinder Dogging Available on Special Order
- Wear Points Insulated by Nylon Sleeves and Rollers





Minimum order: 1 each



Materials:

Body and Push-Pad: Extruded Aluminum Mechanical Components: Stainless and

Hardened, Plated Steel

Latch and Strikes: Sintered Steel



Entrance Door Options

JACKSON 1200 SERIES PANIC EXIT DEVICES

- Designed for Use With 1-3/4" (44)
 Narrow, Medium, and Wide Stile
 Aluminum, Wood or Hollow Metal Doors
- "Soft-Touch" Smooth Action Push-Pad
- Field Sizeable

PART NO.	TYPE	HANDING	FINISH
31127537628	36" Surface Vertical Rod	Non-Handed	Satin Aluminum
31127537313	36" Surface Vertical Rod	Non-Handed	Dark Bronze
311285L37628	36" Concealed Vertical Rod	Left Hand-Reverse Bevel	Satin Aluminum
311285R37628	36" Concealed Vertical Rod	Right Hand-Reverse Bevel	Satin Aluminum
311285L37313	36" Concealed Vertical Rod	Left Hand-Reverse Bevel	Dark Bronze
311285R37313	36" Concealed Vertical Rod	Right Hand-Reverse Bevel	Dark Bronze
311295C3628	Rim – 36" Base-'C' Strike	Non-Handed	Satin Aluminum
311295C4628	Rim – 48" Base-'C' Strike	Non-Handed	Satin Aluminum
311295C3313	Rim – 36" Base-'C' Strike	Non-Handed	Dark Bronze
311295C4313	Rim – 48" Base-'C' Strike	Non-Handed	Dark Bronze

Minimum order: 1 each.

Specifications:

1275 Surface Vertical Rod Device

- Stocked in Both 36" (914) and 48" (1219) Widths
- Standard Door Height 84" (2134 mm) Field Sizeable

1285 Concealed Vertical Rod Device

- Stocked in Both 36" (914) and 48" (1219) Widths
- Standard Height 84" (2134) Extension Available
- Requires Cylinder Mounting Pad When Using Mortise Cylinder for Keyed Outside Entry

1295 Rim Device

- Stocked in Both 36" (914) and 48" (1219) Widths
- Surface Mounted Roller Strike Standard
- Requires Rim Cylinder for Keyed Entry

JACKSON 10 SERIES PUSH-PAD RETROFIT DEVICE

- Sleek, Contemporary Style Push-Pad to Retrofit Existing CRL Jackson 1085 Concealed Vertical Rod Crossbar Exit Device
- Uses Existing 10 Series Rod and Case Assembly
- Easy Installation Cut to Fit

PART NO.	HANDING	FINISH
311285RL3628	36" Left Hand-Reverse Bevel	Satin Aluminum
311285RR3628	36" Right Hand-Reverse Bevel	Satin Aluminum
311285RL3313	36" Left Hand-Reverse Bevel	Dark Bronze
311285RR3313	36" Right Hand-Reverse Bevel	Dark Bronze



Materials:

Base and Push-Pad: Extruded Aluminum Mechanical Components: Stainless and

Model 1285

Model 1295

Hardened, Plated Steel

Latch and Strikes: Sintered Steel



Specifications:

 Stocked in Both 36" (914) and 48" (1219) Widths

Materials:

Base and Push-Pad: Extruded Aluminum Mechanical Components: Stainless and Hardened, Plated Steel



Entrance Door Options



- **Access Control Handles With** a Large Selection of Exterior Fixed Pulls for Medium and **Wide Stile Doors**
- Available in Polished and Brushed Stainless, Satin and Polished Brass, and Oil Rubbed Bronze
- Custom Finishes Available By **Special Order**

CRL-Blumcraft manufacturers a complete line of Access Control Handles for all your door needs. We have Panic Devices, Deadbolt Handles, and Electronic Egress Control Handles in a wide variety of configurations. We can also supply you with Dummy Handles to match these devices, allowing you to maintain the same appearance throughout the project, but without the added costs. Please review the following pages for the complete selection, or visit crlaurence.com for more information.



Access Control Handles









For additional information, 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 e-mail us through our web site at **crlaurence.com**. From the home page click on Contact Us, and then click on Technical Sales for Commercial Products.



Entrance Door Options

Access Control Handles

- Available in Panic, Deadbolt, Electronic Egress, and Dummy Models
- Stock Sizes Available for Immediate Shipment
- Custom Sizes Ship Within One to Two Weeks



CRL-BLUMCRAFT PANIC HANDLES

- Elegant Tubular Design
- UL and ANSI/BHMA Certified



The operating mechanism concealed within the vertical tubing of our Panic Handles retracts the latch bolt when the interior actuation bar is pushed. An optional exterior Keyed Access Device can be installed to allow entry. A special dogging feature allows the doors to remain unlocked during business hours. Electronic Strikes are also available, providing a variety of secured entry options.



CRL-BLUMCRAFT DEADBOLT HANDLES

- Easy Secure Access
- ANSI/BHMA Certified

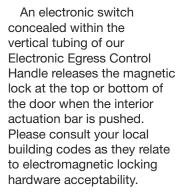
The locking mechanism is concealed within the vertical tubing of our Deadbolt Handles, providing easy access through the use of a variety of keying options. An optional Top Latch Roller Bolt allows the use of Electronic Strikes for controlled entry systems.





CRL-BLUMCRAFT ELECTRONIC EGRESS CONTROL HANDLES

- Ideal for Maintaining Security and Aesthetics
- UL Recognized Component
- U.S. Patent No. 7,347,461





CRL-BLUMCRAFT DUMMY HANDLES

- An Endless Variety of Configurations are Available to Match Our Panic, Deadbolt, and Electronic Egress Handles
- Elegant Tubular Design

When functionality is not required, our Dummy Handles can be made to match any of our Panic, Deadbolt or Electronic Egress Handles, giving you the same appearance throughout your project.



Online usalum.com By Phone (800) 262-5151
Online crlaurence.com By Phone (800) 421-6144



Entrance Door Options

STANDARD INTERIOR CONFIGURATIONS FOR CRL-BLUMCRAFT PANIC HANDLES



Available with or without Keyed Access Device

For Balanced Door Panic Handles see opposite page

Access Control Handles



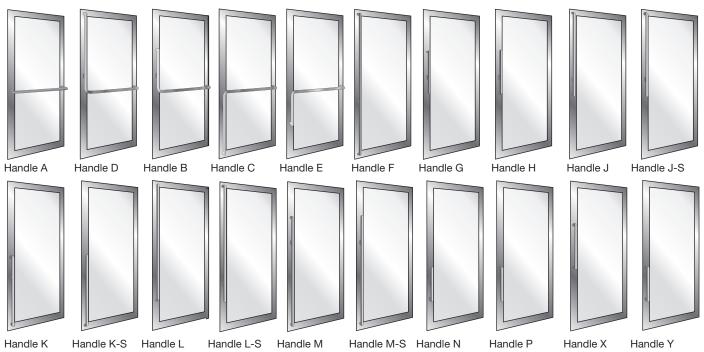




NOTE: All Exterior Fixed Handles below can be used in combination with any Panic Handle.

Contact U.S. Aluminum Technical Sales at (800) 262-5151 in the U.S. and Canada, or International at (323) 268-4230, and ask for Ext. 5305. You can also send e-mail from the **usalum.com** home page.

EXTERIOR HANDLE COMBINATIONS FOR DOORS WITH CRL-BLUMCRAFT PANIC HANDLES



NOTE: All Access Control Handles on this page function as health and safety tools, and may only be purchased through CRL Authorized Glass Temperers and Door Manufacturers.



Entrance Door Options

- Specifically Designed for Balanced Doors
- UL, ULC, and ANSI/BHMA Certified
- For 1/2" or 3/4" (12 or 19) Tempered Glass
- Available in Polished and Brushed Stainless, Satin and Polished Brass, and Oil Rubbed Bronze
- Custom Finishes Available By Special Order
- Custom Sizes Ship Within One to Two Weeks

Our Balanced Door Panic Handles were created to meet the building code requirements for Balanced Doors, while maintaining an excellent appearance. The building code states that the push pad shall not extend more than one-half the width of the door measured from the latch side, and this creates an undesirable appearance.

Our BDA100 Series has a fixed handle portion that extends toward the hinge side of the door, with a clearly defined push pad handle portion at the latch side of the door. This wider handle has greatly improved aesthetics over a handle that only spans one-half of the door's width.

Yet another fine example of our commitment to meeting building code requirements, while at the same time delivering the beautiful hardware that our architectural customers demand.

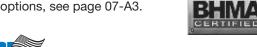
Panic Handles for Balanced Doors • Series BDA100





EXTERIOR HANDLE COMBINATIONS FOR BALANCED DOORS WITH CRL PANIC HANDLES

NOTE: Exterior Fixed Handles shown below can be used in combination with our BDA100 Series Panic Handle. For additional Exterior Fixed Handle options, see page 07-A3.









Handle A-BD





Handle D-BD

Handle B-BD

Contact U.S. Aluminum Technical Sales at (800) 262-5151 in the U.S. and Canada, or International at (323) 268-4230, and ask for Ext. 5305. You can also send e-mail from the **usalum.com** home page. **NOTE:** All Access Control Handles on this page function as health and safety tools, and may only be purchased through CRL Authorized Glass Temperers and Door Manufacturers.

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