

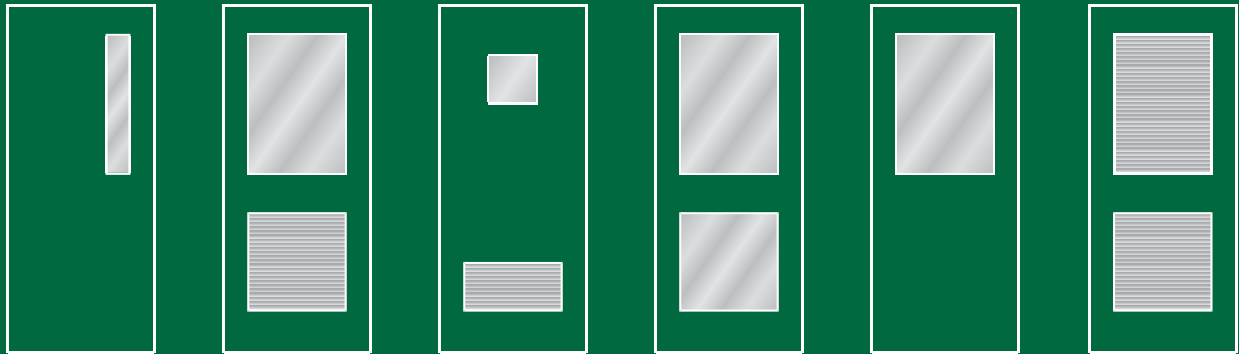
# cline DOORS

**Series 200BE**



CLINE DOORS CERTIFIED  
**EnviroGreen**  
Sustainable and Recyclable Building Materials

**NGA**  
National Glass Association



## **FRP** SCHOOL DOORS

*Custom Aluminum Doors and Frames Since 1961*

# Tomorrow's School Door is Here Today!

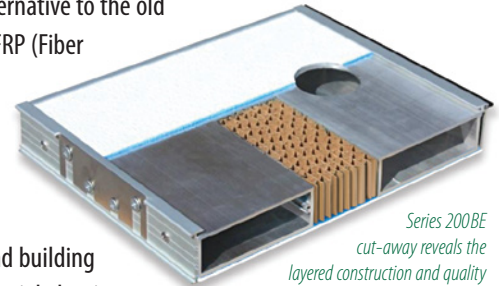


Custom Aluminum Doors  
and Frames Since 1961

Cline Doors has gone back to the drawing board to design a flush door to meet the changing requirements of today's educational system infrastructure. Code changes, environmental changes, structural changes, and the basic needs of our public school systems have changed to the degree that no existing flush panel door addresses all of these issues. This includes steel, wood, aluminum, and FRP-type flush panel doors. In recent years, there have been a few companies offering an alternative to the old standards of steel and wood flush doors. These are the FRP (Fiber Reinforced Polyester) flush panel doors. Along with low maintenance and a long life, the FRP flush door answered some of the needs for a public school


environment, but these doors still do not meet today or tomorrow's requirements.

Cline Doors has taken the lead in creating what we feel is the ultimate school door of tomorrow and building it today. Our new design is based on over forty-five years of manufacturing experience in the industrial aluminum flush panel door market, and fifteen years in producing a commercial FRP flush door. We incorporated our advanced technologies to create the ultimate FRP school door — hence, the Cline Series 200BE FRP flush panel school door was born.



Series 200BE  
cut-away reveals the  
layered construction and quality  
materials featured in our FRP Flush Doors.

## Exclusive Features

 **Honeycomb Core** — Organic materials used to form core with high compression strength of 94.8 pounds per square inch.

**Hardware Reinforcement** — Hardware backup tubes are a minimum of 4.25-inches wide and 1.375-inches deep, with a wall thickness of 0.125-inches. Contiguous for the full perimeter of the door.

**Door Trim** — Lock and hinge stile trim are mechanically fastened to the backup tube to help protect the flush door edges and allow field replacement. Lock stile beveled edge with integral weather stripping.


**Trim Pieces** — Finished with a minimum of Class I anodized finish.

**Vision Lites** — Glazed with snap-in, non-removable extruded aluminum stops and no exposed fasteners.

**Louvers** — Aluminum alloy frames and blades, allowing a minimum of 50 percent free air flow. All exposed fasteners are stainless steel.

**Skins** — Cross laminate seams for corner strength and laminated the full length of the door.

 **Aluminum** — Contains both pre- and post-consumer recyclable content.

 **Adhesives** — Water soluble, non-toxic with No VOCs (volatile organic compounds).



Green since 1961, Cline Doors are made of recyclable aluminum materials, and designed to withstand even the harshest of chemicals or environments. Cline Doors pre- and post-consumer recycle content can contribute to your Sustainable Design and Green Building requirements, while our doors' low maintenance and service longevity also reduce your Life-Cycle Costs.



## American Society for Testing Materials (ASTM)

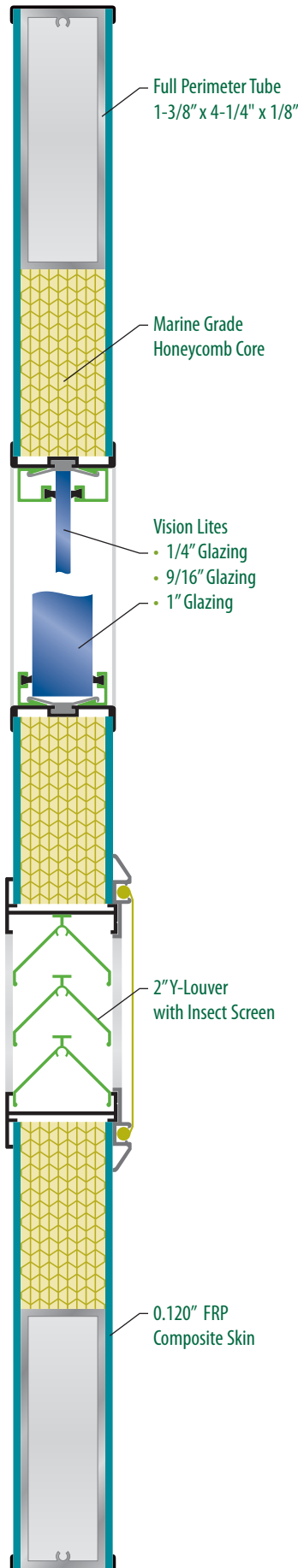
Standard	Year
101/I.S.2-NAFS	2002
Accepted Engineering Practice	2004
ASTM E1300 — Load Resistance of Glass in Building	2002
ASTM E1886 — Impact Test Procedures (Includes Large Missile Impact)	2002
ASTM E1996 — Wind Load Test	2002
ASTM E330 — Structural Load Test	2002

## Impact and Wind Code Compliance

**Florida Building Code #FL6336** — When used in wind-borne debris regions our Series 200BE Flush Door complies with section 1609.1.4 of the Florida Building Code as an impact resistant product and does not require the use of external impact resistant covering.

The Series 200BE Flush Doors meet the requirements for enhanced protection of essential facilities (missile level "E", wind zone 4) as defined in ASTM E1996.





## Construction Specifications

Aluminum-member heavy-duty FRP doors shall be Cline Series 200BE. Doors shall be a minimum thickness of 1.75-inches (44.45mm) and a minimum 3-ply with a FRP composite skin thickness of 0.120-inch (3.18mm). Door facing shall be a composite, UV inhibited, glass fiber laminate (FRP) with a pebble-like embossed pattern. Reinforced polyester plastic panels shall be or exceed allowances per ASTM D3841. FRP face sheets shall be a Class C Flame Spread and Smoke Developed Rating (ASTM E 84), and have a flame spread of 120 and a smoke development of 290 for both interior and exterior faces of interior and exterior doors. Core shall be an organic based marine grade honeycomb core with high compression strength of 94.8 psi (ASTM C365), and internal aluminum hardware backup tube. The hardware backup tube shall be a minimum of 4.25-inches in width, 1.375-inches in depth with a wall thickness of 0.125-inches. Internal framing members shall be mechanically joined with #10 stainless steel threaded fasteners. **[Option:** Internal framing members shall be mechanically joined top and bottom, 0.375-inch plated steel tie rods secured with stainless nylock nuts.] Door edges and face sheets shall be flush in appearance; face sheets shall be trimmed with replaceable aluminum reglets of 6063-T5 alloy on perimeter edges. Lock stiles shall have aluminum bevel-edge and wool-pile weather stripping. Hinge stile to be prepared for standard template 4.5-inch x 4.5-inch butt hinge. **[Option:** Hinge stile to be smooth to accept standard geared hinges.] Beads and trim wall thickness shall be minimum thickness of 0.050-inch (1.27mm). Nominal door sizes shall be provided. Standard clearances shall be: hinge and lock stiles, 0.125-inch (3.18mm); between meeting stiles on pairs, 0.250-inch (6.35mm); at top rails, 0.125-inch (3.18mm); between door bottom and threshold, 0.125-inch (3.18mm). Bonding agents shall meet EPA requirements.

## Glazing

Vision Lites shall be glazed with 0.25-inch (6.36mm) thick tempered glass with snap-in, non-removable stops of extruded aluminum alloy 6063-T5, minimum thickness of 0.050-inch (1.27mm). Vinyl inserts shall be used for sealing. No exposed fasteners. **[Options:** Glazing of 1-inch (25.4mm) thick insulating, tempered or 0.5625-inch (14.29mm) thick laminated glass can be specified.]

## Door Louvers

Blades of louvers shall be 6063-T5 aluminum alloy, 0.062-inch (1.58mm) minimum thickness. Louver blades shall be inverted "Y" with minimum 50 percent free air flow. All exposed fasteners to be stainless steel. Insect screen shall be 18 x 16 mesh, 0.011-inch (0.28) diameter aluminum set in a 0.050-inch (1.27mm) extruded aluminum alloy frame.

## Hardware Preparation

Standard preparation shall included 4.5-inch x 4.5-inch (114.3mm) template, full mortise hinge prep, single spindle lock prep, mortise lock edge prep only, and flushbolt prep for pairs. Surface applied hardware shall be drilled and tapped in field by installer. Additional hardware preparation to be specified. Concealed hardware and pivot hinges are not recommended or supported by manufacturer.

## Finish

Exposed aluminum surfaces shall be anodized in accordance with Aluminum Association AAM12C22A41, Class I, clear 0.7mil (0.02mm) minimum thickness. Optional aluminum finishes to be specified.

### Cline Doors Warranty and Quality Assurance

Cline Aluminum Doors, Inc. warrants the workmanship and material in Cline Doors with standard hardware preparation, excluding special finishes and hardware, for a period of 10 years after purchase, when installed properly and used under normal conditions and reserves the right to repair or replace doors. Complete warranty available upon request.

Cline products are manufactured in the U.S.A., using only American components and labor.

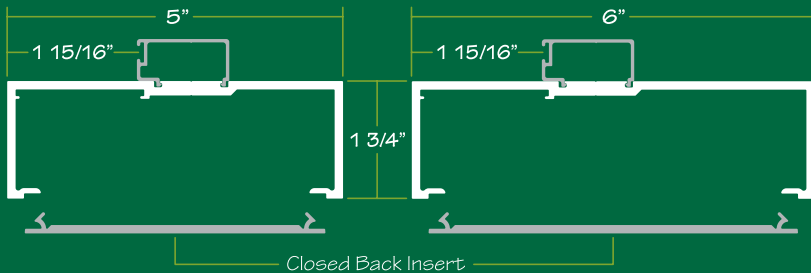
## A Tough Surface With Lasting Beauty

**Fiber Reinforced Polyester (FRP)** panels provide attractive, pebble-embossed or textured face sheets. FRP surfaces resist impact, abrasion, graffiti and other physical abuse. Neither FRP nor aluminum will rust, rot, corrode, peel, tear or warp. Both are virtually impervious to salt air, chemicals and solvents. The FRP face panels have been UV inhibited for color stabilization.

FRP panels enable a wide range of color selection without increasing project costs. These resin-rich surfaces never need painting and contain no crevices in which dirt, bacteria or mold can hide. Mineral spirits or any general household cleaner applied with a clean cloth, then rinsed is all that is needed to remove oily residues or substances.

## Aluminum Framing Specifications

Aluminum heavy-duty frames shall be Cline 5-inch (127mm) frames. Frames shall be constructed from extruded aluminum 6063-T5 alloy with a minimum wall thickness of 0.125-inch (3.18mm). Corners shall be cut square and fastened using concealed stainless steel screws. Snap-in door stop to receive replaceable wool pile weather-stripping. Hinge and strike mounting plates shall be of 0.1875-inch (4.76mm) extruded aluminum bar stock. Frame option of Cline 6-inch (152.39mm) frame to be specified.



Customer satisfaction is our goal with Cline Doors quick turn-around on standard quotes, short lead times on deliveries and quality packaging for safe transport to your job site.

### Services offered at no additional charge include:

- No charge for shop drawings
- 4.5-inch x 4.5-inch template butt hinge preparation in door and frame
- Flush bolt preparation on pairs when specified
- Cylindrical lock
- Mortise lock edge preparation

ALL HARDWARE PREPARATIONS PER CLINE STANDARDS

## Stock FRP Colors



Beige



Gray



White



Dark Bronze

Custom colors are also available, ask your Cline Doors representative for details.

## Anodized Finishes

AAMA 611.92 – Integral color anodic finishes.

Architectural priorities for most commercial and industrial purposes are best served with anodized finishes which provide a durable, maintenance-free finish on aluminum products.

Cline Doors has selected Clear Class II and Dark Bronze Class I as finish standards based upon uniformity of color characteristics. Other available Aluminum Association finish designations are included in this chart.

Finish	Class I Coating	Class II Coating
Clear	AAM12C22A41 215	AAM12C22A31 204
Light Bronze	AAM12C22A44 442	AAM12C22A34 342
Medium Bronze	AAM12C22A44 443	AAM12C22A34 343
Dark Bronze	AAM12C22A44 444	AAM12C22A34 344
Black	AAM12C22A44 446	AAM12C22A34 346

# Specify Cline – Call today for your project quote!

Be sure to inquire about our entire line of quality aluminum doors and frames.



**Series 100BE**  
Aluminum Flush Doors



**Series 200BE**  
FRP School Doors



**Series 400SE**  
Screen Doors



**Series 500SE**  
Stile and Rail Doors

## Distributed by:

Custom Aluminum Doors and Frames Since 1961



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