

NJ DOT PROJECT REFERENCE NUMBER _____
SPECIFICATION

Freehold Maintenance - Door Installation
200 Daniels Way
Freehold, NJ 07728

The Following is the SCOPE of work for this project as well as all pertinent *MATERIAL* details. Please refer to the attached specifications for specific materials requested for this bid. Please provide all specified materials and associated materials that may be required but not listed for a complete and proper installation.

Scope:

- Removal of 3 Interior doors and hardware, and removal of 3 interior door Frames.
- Removal of 2 Exterior doors and hardware, and removal of 2 exterior door Frames.
- Installation of 2 New 90 min fire rated FRP doors and 3 NON-fire rated FRP doors.
- All glass to be clear 90min rated pyran platinum F
- Installation of new door hardware, to match new hardware being installed state wide (Hardware sets and manufacturer listed below)
- Full perimeter caulk, inside and out. (CRL- M66- Dark Bronze)
- Large Format I/C cores supplied and installed to match current keying system

Materials List/Openings:

- All NON FIRE RATED doors to Be FD55 model with core liner.
- All FIRE RATED doors to be FD90- with STAINLESS STEEL EDGES
- All doors to have Dark Bronze FRP face sheets
- All doors to have Dark Bronze anodized trim, and vision kits (where applicable)
- All Flush Pulls by FRP door Manufacturer (where noted) will match Door trim
- 2 Frames to be replaced to be FS26 Dark bronze anodized aluminum frames
- 2 Frames to be replaced to be HOLLOW METAL 90 min rated factory welded and labeled
- 1 Frame to be replaced to be HOLLOW METAL NON-Rated custom single rabbeted 3" frame
- All doors to have Dark Bronze Hager 780-224HD Full Mortise roton hinges
- All doors to have Yale Large Format Final I/C cores Keyed as per NJDOT specifications
- All doors to have integral bottom sweep weather seal by Door manufacturer
- All Doors to be keyed as per NJ DOT's Request (key quantity T.B.D)
- All Existing door contacts to be re-used/re-installed

Door #1 (Garage Bay #1)

3ft wide x 7ft 2" high - 90 min fire rated FD90 FLUSH FRP Door

- 5 3/4" 90 min rated factory welded and labeled Hollow Metal frame (prime painted)
- Yale 7100 Series Stainless Steel Rim bar with Passage Trim x 630 finish
- Hager 780-224HD Full Mortise Roton Hinge x Dark Bronze Anodized Finish
- Norton 7500 series closer x 690 finish

Door #2 (Garage bay #2)

3ft wide x 7ft 2" high - 90 min fire rated FD90 FLUSH FRP Door

- 5 3/4" 90 min rated factory welded and labeled Hollow Metal frame (prime painted)
- Yale 7100 Series Stainless Steel Rim bar with Passage Trim x 630 finish
- Hager 780-224HD Full Mortise Roton Hinge x Dark Bronze Anodized Finish
- Norton 7500 series closer x 690 finish

Door #3 (Bathroom Closet)

2ft wide x 7ft 2" high- FD55 FLUSH FRP Door

- 3" single rabbeted custom made Hollow Metal frame (prime painted)
- Yale AU5405LN Series Storeroom Function Lock x 626 finish
- Hager 780-224HD Full Mortise Roton Hinge x Dark Bronze Anodized Finish
- Norton 7500 series closer x 690 finish

Door #4 (North Side Emergency Exit)

3ft wide x 7ft 2" high - FLUSH FD55 FRP Door

- 2"x6" FS26 Bronze Anodized aluminum frame
- Yale 7100 Series Stainless Steel Rim bar
- Simplex 5000 series Pushbutton lock x panic prep- Key in lever (keyed to DOT specs)
- Hager 780-224HD Full Mortise Roton Hinge x Dark Bronze Anodized Finish
- Norton 7500 series closer x 690 finish

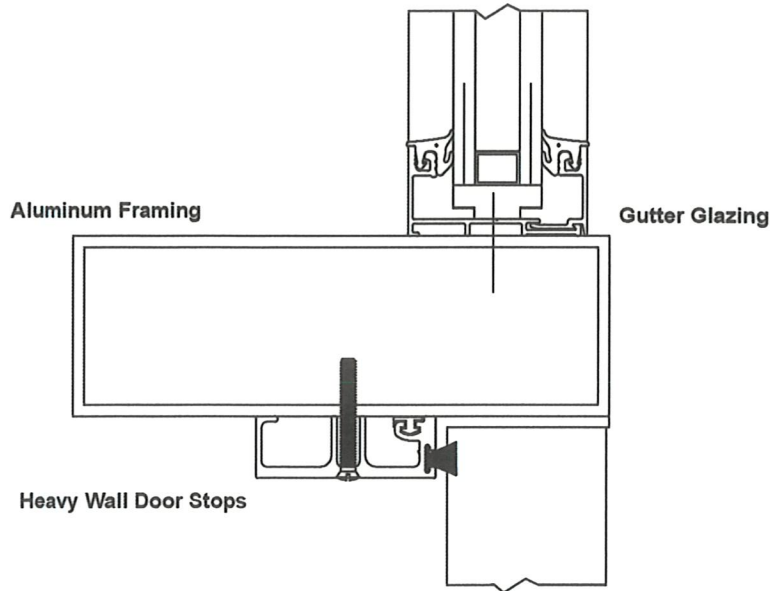
Door #5 (South Side Emergency Exit)

3ft wide x 7ft 2" high - FLUSH FD55 FRP Door

- 2"x6" FS26 Bronze Anodized aluminum frame
- Yale 7100 Series Stainless Steel Rim bar
- Simplex 5000 series Pushbutton lock x panic prep- Key in lever (keyed to DOT specs)
- Hager 780-224HD Full Mortise Roton Hinge x Dark Bronze Anodized Finish
- Norton 7500 series closer x 690 finish

FS - Heavy Wall Aluminum Frame Series.

Related Section - 08255 Entrance Doors

**Various Frame Sizes Available**

FS24 - 2" x 4 1/2"

FS25 - 2" x 5"

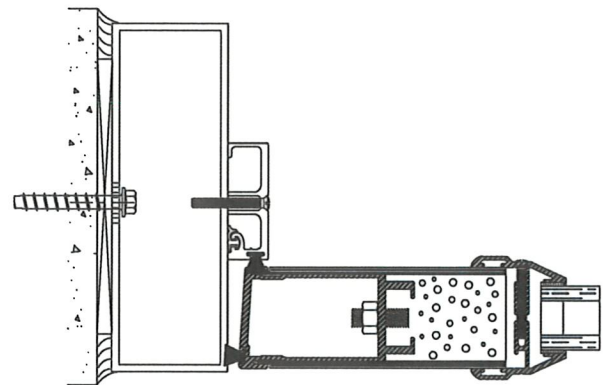
FS26 - 2" x 6"

FS28 - 2" x 8"

Consult with FRP Architectural Doors
for other optional sizes, special side base heights
and 4" faces.

Frame Features:

Available in various overall face height and jamb widths
 Rectangle tubular aluminum with 1/8" thick walls
 Wall thickness supports aluminum gear hinges
 Shear block mortise and tenon corner joint assembly
 Applied surface mounted door stops.
 1/8" Heavy wall reinforcing on door stops for rim strikes and closer
 1/8" Heavy wall hardware reinforcing
 Tee-Slotted weatherstripped Included on door stops
 Gutter designed Side Light and Transom Glazing
 Frame glazing Options are 1/4" or 1" glass pockets
 Standard aluminum finishes are anodized Class 1, Clear Satin or Dark Bronze
 Kynar painted finish color options are available
 Consult FRP Architectural Doors for other glass thickness req requirements
 Consult FRP Architectural Doors for other finish color requirements.



Typical Jamb Section at wall -Anchors are by others

Strong, Powerful Security Solutions Since 1862.

| SIMPLEX® Mechanical Pushbutton Locks | | 5000 | 1000 EE1000 | L1000 8100 | 2015 | 3000 | 6200 | 7100 | LD450 LD470 |
|--|-------------------------------|------|----------------|---------------|------|------|------|------|----------------|
| ACCESS | PIN Access (Single User) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Mechanical Key Override | ✓ | ✓ | ✓ | | ✓ | | | |
| LOCKING DEVICES | Cylindrical Latch | ✓ | ✓ | ✓ | | | ✓ | | |
| | Mortise (ASM) | ✓ | | ✓ | | | | | |
| | Exit Trim | ✓ | | ✓ | ✓ | | | | |
| | AR Latch | | | | | ✓ | | | |
| | Tubular Latch | | | | | | | ✓ | ✓ |
| | Tubular Deadbolt | | | | | | | ✓ | |
| | Auxiliary Latch | | | | | | | ✓ | |
| MECHANICAL FEATURES | No Wire Installation | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | No Computer Programming | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | No Software Programming | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Mechanical Key Override | ✓ | ✓ | ✓ | | ✓ | | | |
| | Interchangeable Core (Best) | ✓ | ✓ | ✓ | | | | | |
| | Removable Core (Large Format) | ✓ | ✓ | ✓ | | | | | |
| | Removable Mortise Cylinder | | | | | ✓ | | | |
| | Key-in-Lever | ✓ | | | | | | | |
| | Non-handed (Field Reversible) | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ |
| | Vandal Resistant Clutch | | | | | ✓ | ✓ | ✓ | ✓ |
| | Fits 1 3/8" to 2 1/4" * | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
| | No Batteries | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Indoor/Outdoor (Approved) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Latch Holdback | | | | | | | ✓ | ✓ |
| | Passage | ✓ | ✓ | ✓ | | ✓ | | | ✓ |
| | Lockout/Privacy | ✓ | ✓ | ✓ | | ✓ | | | |
| | Programmed at Keypad | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Various Finishes Available | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | |
| WARRANTY CERTIFICATION | 3-Year Warranty | ✓ | ✓ | ✓ | | | | | |
| | 1-Year Warranty | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| | BHMA Grade 1 Certified | ✓ | | | | | | | |
| | 3 Hr UL/ULC Fire Rated Latch | ✓ | ✓ | ✓ | | | ✓ | | |
| | ADA Compliant Levers | ✓ | | ✓ | | | | | ✓ |

* 8100 and EE1000 series fit 1 3/4" to 2 1/4" door thickness

* L1076 model fits 1 3/4" door thickness only

* LD series fit 1 3/8" to 2 1/2" door thickness

A Solution for Every Access Point...and Every Budget.

| | 5000 | 1000 EE1000* | L1000 8100* | 2015 | 3000 | 6200 | 7100 | LD450 LD470 |
|-------------------------------|--|--|--|---------------------|--|---------------------|---|-------------------------------|
| SIMPLEX® | | | | | | | | |
| ACCESS CREDENTIAL | | | | | | | | |
| NUMBER OF ACCESS CODES | SINGLE CODE | SINGLE CODE | SINGLE CODE | SINGLE CODE | SINGLE CODE | SINGLE CODE | SINGLE CODE | SINGLE CODE |
| LOCKING DEVICE OPTIONS | | | | | | | | |
| FEATURES | 1 3/4" → 2 1/4" | 1 3/4" → 2 1/4" | 1 3/4" → 2 1/4" | 1 3/4" → 2 1/4" | 1 3/4" | 1 3/4" → 2 1/4" | 1 3/4" → 2 1/4" | 1 3/4" → 2 1/4" |
| OPTIONS | PRIVACY/ LOCKOUT EXTERIOR/INTERIOR COMBINATION CHANGE PASSAGE INTERIOR COMBINATION CHANGE | PRIVACY/ LOCKOUT ENTRY/EGRESS PASSAGE INTERIOR COMBINATION CHANGE | PRIVACY/ LOCKOUT ENTRY/EGRESS PASSAGE INTERIOR COMBINATION CHANGE | | PRIVACY/ LOCKOUT PASSAGE INTERIOR COMBINATION CHANGE | | LATCH HOLDBACK INTERIOR COMBINATION CHANGE | LATCH HOLDBACK PASSAGE |
| CERTIFICATIONS | ADA Compliant BHMA CERTIFIED GRADE 1 | | ADA Compliant | | | | | ADA Compliant |
| KEY OVERRIDE | SFIC, LFIC K-IL | SFIC, LFIC | SFIC, LFIC | | REPLACEABLE MORTISE CYLINDER | | | |

* 8100 and EE1000 series fit 1 3/4" to 2 1/4" door thickness

* L1076 model fits 1 3/4" door thickness only

* LD series fit 1 3/8" to 2 1/2" door thickness

For more detailed information, please go to www.dormakaba.us

BEYOND SECURITY

KABA®

Simplex®
5000



Features

Access Control

Mechanical pushbutton lock—eliminates problems and costs associated with issuing, controlling, and collecting keys and cards. Provides exterior access by combination, while allowing free egress

No Battery

Fully mechanical lock eliminates the material and labor expense of battery replacements

Number of Codes

Single access code—one easy-to-manage code for all users

Programming

Lock is easily programmed via keypad without removing the lock from the door

Handing

Non-handed, pre-assembled for left-hand door installations—easily changed in the field

Key Override

Key-in-lever cylinders, small format interchangeable cores, large format removable cores

Operation Modes

- Pushbutton Access
- Passage (select models)—allows access without using the lock access code. Feature activated from the inside with a thumbturn or key (included with all passage feature models).
- Exit Trim—may be "dogged" if Exit Device allows
- Lockout (select models)—disables the lock from the inside so that the code cannot be used to gain access. Access is permitted using the key override only when in this mode (5067 model only).

Direct Drive Design

Clutch free design—minimizes friction and wear

Economical

A cost effective access control solution

Features continued

| | | | |
|--|--|---------------------|-----------------------|
| Locking Device Options | Cylindrical: Cylindrical latch with 3-hour UL/ULC fire rating on "A" labeled doors | | |
| | Rim Exit Device: Compatible with most leading brands of Exit Devices (Exit Device and mounting hardware not included) . Universal mounting plate (included) simplifies installation and eliminates any requirement to stock different locks/plates for various Exit Devices. | | |
| | American Standard Mortise: With 1¼" (32 mm) face plate; with and without deadbolt | | |
| Exit Device Compatibility | Arrow S1250 | Dorex 8500R/8500F | Sargent 8888 |
| | Arrow S3883F/S3800 | Dorex 9500PR/9500FR | Von Duprin 22/22F |
| | Black & Decker (K-2) QED111/112 | Dorma 9300/F9300 | Von Duprin 98/98F |
| | Cal Royal 9800 | Monarch 18R*, F18R* | Von Duprin 99/99F |
| | Cal Royal 2200 | Precision 21/FL21 | Von Duprin XP98/99 |
| | Corbin Russwin ED5200/5200A | Sargent 2828 | Yale YME2100/2100 |
| | Detex 1001 BP1 | Sargent 3828 | Yale 7100 |
| | Detex 10/F10 Series | Sargent 8810E/8800 | |
| *(requires special K-Hub Adapter) | | | |
| ATTENTION: Compatibility is subject to change if modifications are made by Exit Device manufacturers without Kaba's knowledge. For the most accurate listing of compatible Exit Devices, visit http://kaba.to/Simplex5000 . | | | |
| Mechanical Features | | | |
| Construction | Extra heavy-duty solid cast housings; solid cast levers, ADA-compliant levers, and wear tested for extensive use on indoor and outdoor applications | | |
| Numeric Keypad | Vandal resistant, metal pushbuttons | | |
| Backset | Cylindrical—2 ¾" (70 mm) backset, 2 ⅜" (60 mm) backset Exit Device—Varies by exit device Mortise—2 ¾" (70 mm) backset | | |
| Latch | Cylindrical—½" (13 mm) latch, ¾" (19 mm) latch (optional) Exit Device—Supplied with Exit Device Mortise—¾" (19 mm) latch, 1" (25 mm) deadbolt (optional) | | |
| Universal Mounting | Simplex 5000 Exit Trim—Universal mounting plate (included) simplifies installation and eliminates any requirement to stock different locks/plates for various exit devices | | |
| Minimum Stile Recommended | 5" (127 mm) | | |
| Weight | Cylindrical—9.25 lbs. (4.19 kg) Exit Device—8 lbs. (3.63 kg) Mortise—11 lbs. (4.98 kg) | | |
| Key Override | | | |
| Universal Key-in-Lever | Includes Kaba 1599 6-pin cylinder with two keys, Kaba 90 or Schlage "C" keyway, keyed different | | |
| | Includes four additional tailpieces for compatibility with: | | |
| | Abloy 5277; 5477 | Kaba 1539; 1599 | Medeco 20W200H1 |
| | Arrow C100 | Kaba Gemini 4730 | Sargent 10 Line |
| | ASSA 65611; 65691 | Kaba Peaks 1099 | Schlage 23-001 |
| | Corbin Russwin 2000-03 | Marks | Schlage Primus 20-760 |
| Australian: Kaba expert 107K5, Boyd KC286 European: Quattro S/Expert, AP2 (5 and 6-pin) | | | |
| Interchangeable Cores | Small format—Best and equivalents (6 or 7-pin length); core not included | | |
| Removable Cores | Large format—ASSA/Medeco/Yale/Abloy (5 or 6-pin), Corbin Russwin (6 or 7-pin length), Schlage, and Sargent ; core not included | | |

Installation

| | |
|-------------------------------|--|
| Door Preparation | Easily installs on wood or metal doors. ASA 161 door preparation with additional through holes. |
| Door Thickness | Cylindrical—1 3/8" (35 mm) to 2 1/4" (57 mm) Pre-assembled to accommodate doors 1 5/8" (41 mm) to 2" (51 mm) Exit Device and Mortise—1 3/4" (44 mm) to 2 1/4" (57 mm) Pre-assembled to accommodate doors 1 3/4" (44 mm) to 2 1/8" (54 mm) |
| Items Supplied Include | Lock assembly, installation manual, full scale template, and required hardware |

Certification and Testing

| | |
|-------------------------------|--|
| Accessibility Standard | Americans with Disabilities Act (ADA) ; ADA-compliant levers |
| Durability | ANSI/BHMA Grade 1 Certified (A156.2, 156.13); D.O.D. Compliant 5220.22M for supplemental access control; weather resistant, wear tested for extensive use in indoor and outdoor applications |
| Fire Rating | 3-hour UL/ULC fire rating for "A" label doors and installed with an existing fire-rated exit device (where applicable) |

Warranty

| | |
|-----------------|-----------------|
| Warranty | 3-year warranty |
|-----------------|-----------------|

Available Finishes

| | |
|--------------------------|---|
| Standard Finishes | Satin Chrome 26D (626) housings and levers Black (676) housings with Satin Chrome 26D (626) levers and accents |
| Optional Finishes | Bright Brass 03 (605) housings and levers Satin Brass 04 (606) housings and levers Bright Chrome 026 (625) housings and levers Dark Bronze housing and levers with brass accents |

Standard Finishes



Satin Chrome



Black



Bright Brass



Satin Brass



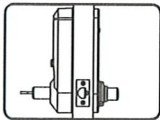
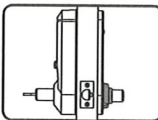
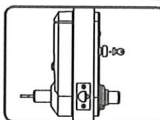
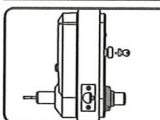
Bright Chrome



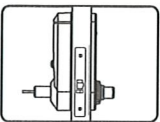
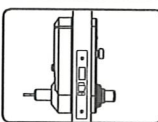
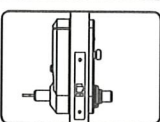
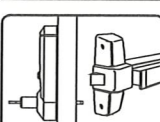
Dark Bronze

Optional Finishes

Cylindrical

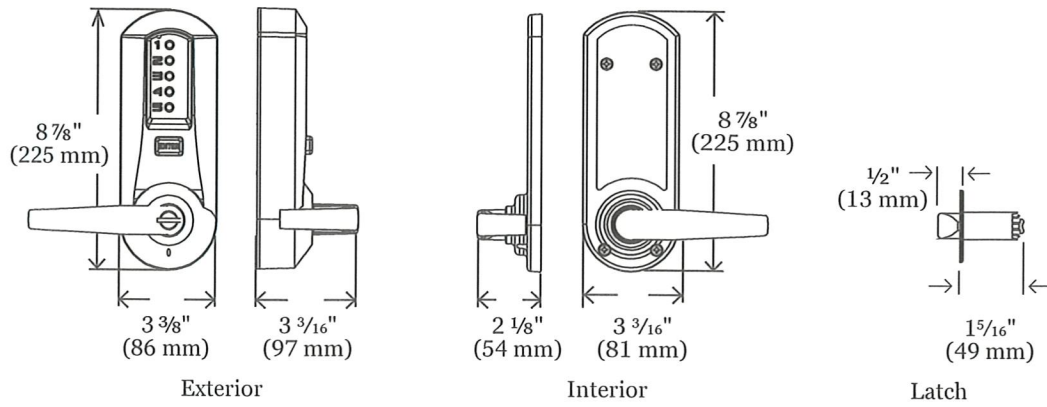
| Model 502x | Model 503x | Model 504x | Model 505x |
|--|--|---|---|
|  |  |  |  |
| <ul style="list-style-type: none"> • Combination Entry • Key Override • Exterior Combination Change • Knob Available | <ul style="list-style-type: none"> • Combination Entry • Key Override • Interior Combination Change, D.O.D. Compliant • Knob Available | <ul style="list-style-type: none"> • Combination Entry • Key Override • Exterior Combination Change • Passage • Knob Available | <ul style="list-style-type: none"> • Combination Entry • Key Override • Interior Combination Change, D.O.D. Compliant • Passage • Knob Available |

Mortise

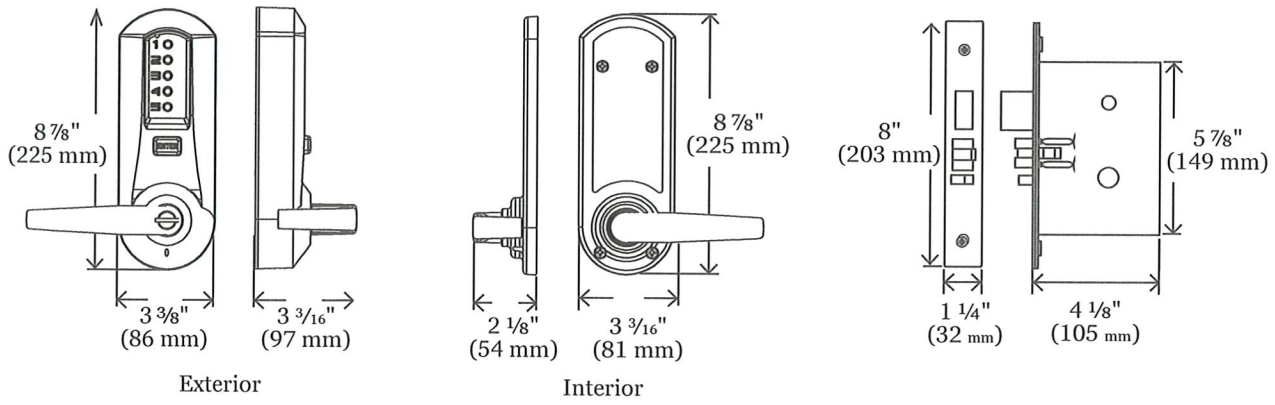
| Model 5066 | Model 5067 | Model 5068 | Model 5010 |
|---|--|--|---|
|  |  |  |  |
| <ul style="list-style-type: none"> • Combination Entry • Key Override • Exterior Combination Change (only) | <ul style="list-style-type: none"> • Combination Entry • Key Override • Deadbolt • Lockout • Exterior Combination Change (only) | <ul style="list-style-type: none"> • Combination Entry • Key Override • Passage • Exterior Combination Change (only) | <ul style="list-style-type: none"> • Combination Entry • Key Override • Exterior Combination Change (only) • Egress with Exit Device (not supplied) |

Exit Device

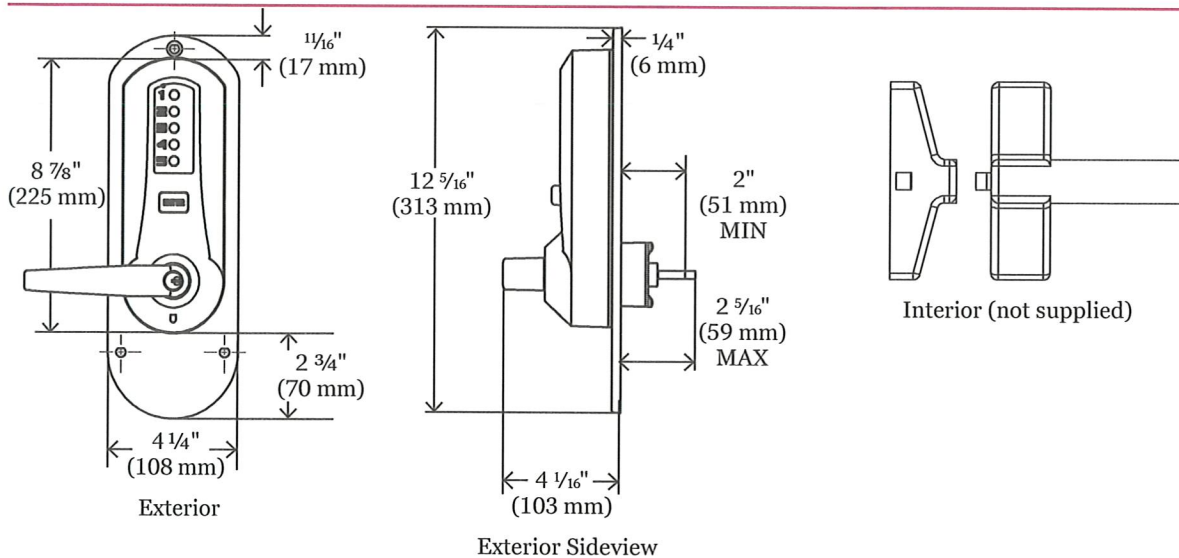
Cylindrical



Mortise



Exit Device



FRP

ARCHITECTURAL DOORS INC.



Phone: 215-604-1545

FRP ARCHITECTURAL DOORS INC.
501 Cambria ave. - Suite 102
Bensalem, Pa. 19020

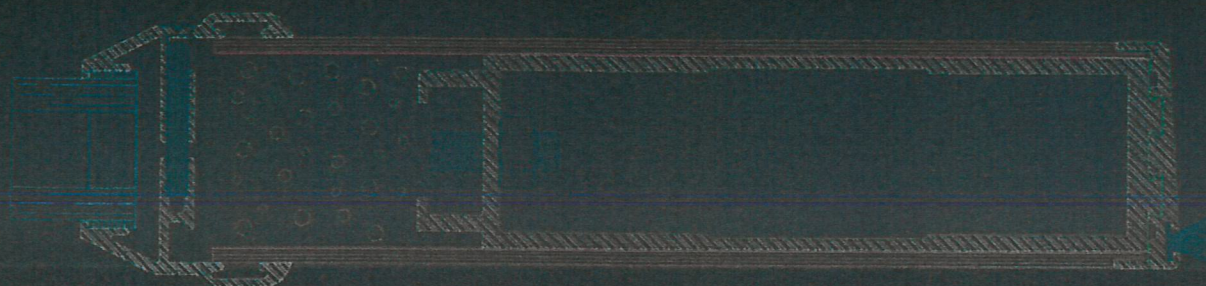
www.FRPARCH.com

FRP

ARCHITECTURAL DOORS INC.

FD55

FRP Faced Door Series



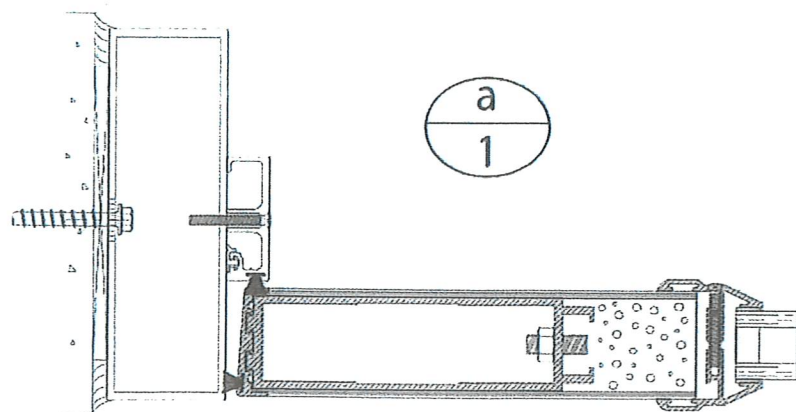
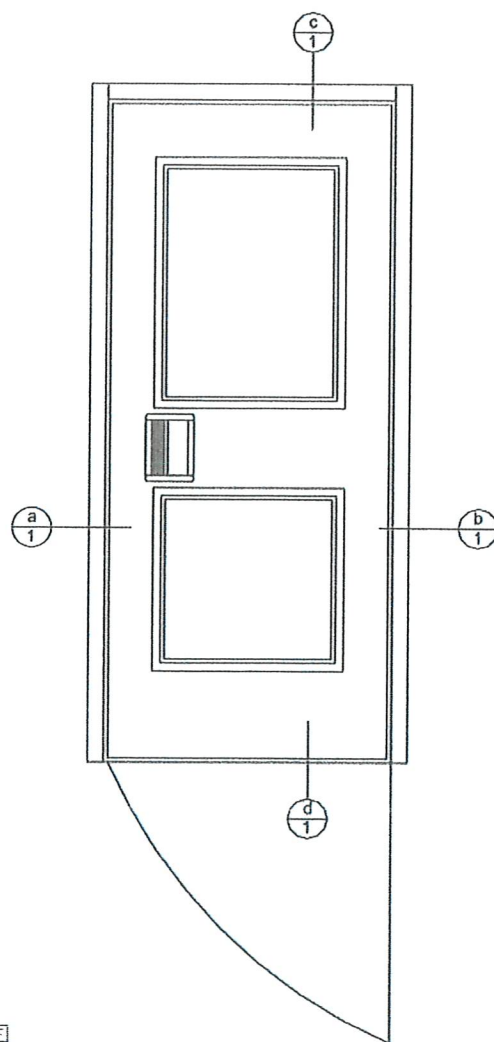
FD55 Lock Edge Meeting Stile

FD55 - The Heavy Wall FRP fiberglass faced door series.

Section 08 - Fiberglass Doors

Door Features:

- 1-3/4" Thickness
- Tubular aluminum internal structure perimeter sub-framing
- Replaceable perimeter trims designed to capture door face sheet edges
- 5" Wide internal sub-frame stiles for lock and hinge sides
- Built in concealed vertical rod support slot
- Mortise and tenon joint with tie rod spline assembly
- Standard insulated core is 25 lb. psi Polystyrene
- Optional insulated core is 5 lb. in place density Urethane
- 1/8" Heavy wall closer reinforcing
- 1/8" Heavy wall hardware reinforcing
- Tee-Slotted weatherstripped beveled lock and hinge trims
- Tee-Slotted weatherstripped door bottom trim
- .120 FRP fiberglass face sheets
- Optional aluminum 1/4" or 1" glass pocketed vision light kits
- Optional recessed door pulls; classic grip or handicap grip options
- Optional inserted concealed manually adjustable door bottoms



FRP ARCHITECTURAL DOORS INC.
501 Cambria ave. - Suite 102
Bensalem, Pa. 19020

Phone: 215-604-1545

www.FRPARCH.com

Part 1 General – Division 8 - Section 08255 Flush FRP Entrance Doors

- 1.1 Provide door assemblies that have been designed and fabricated to comply with specified performance requirements as demonstrated by testing manufacture's corresponding standard systems.

Part 2 Products

2.1 Manufacturer

- A. FRP Architectural Doors Inc. - 215-244-1818 - www.FRPARCH.com
- B. Approved Equal – Subject to compliance with product requirements and the owner's decision of a requested substitution.

2.2 FRP Flush Entrance Doors

- A. Heavy Wall Door Series FD55; 1-3/4" thick flush door with fiberglass reinforced polyester (FRP) face sheets.
- B. Door trim, vision lights and internal sub-frame stiles and rails are constructed of extruded tubular aluminum shapes using billet aluminum, grade 6063 and a T6 tempered alloy.
- C. Door perimeter edge trim, top and bottom are applied to the doors sub-frame.
- D. Construction Components:
 - 1. Sub-Frame stiles and rails.
 - a. Top horizontal rails; full rectangular tube 1-1/2"x 6" with 1/8" wall thickness with tie-rod spline.
 - b. Heavy Duty Optional-Closer Steel Backup Plates. Steel Sleeve insert, 3/16" Steel.
 - c. Bottom horizontal rails; full rectangular tube 1-1/2"x 2-1/2" with 3/8" tie-rod spline.
 - d. Heavy Duty Optional-Bottom horizontal rails; full rectangular tube 1-1/2"x 6" with 1/8" wall thickness with tie-rod spline.
 - e. Lock and hinge vertical stiles; full rectangular tube 1-1/2"x 5 1/2" with flanges and 1/8" wall thickness at hardware points.
 - f. Lock and hinge tubes have an interlocking dove tail edge for locking trim to the sub-frame.
 - g. Corner joint assembled using monumental type mortise and tenon joinery with 3/8" tie-rods thru splines.
 - 2. Perimeter trims are aluminum shapes and are finished to anodize or paint as selected.
 - a. Top and Bottom trims have tee-slot to accept weather-seal. Bottom trim supplied with pile weather-seal.
 - b. Lock edge trim is beveled with pile weather-seal. Trim interlocks to sub-frame dove and secured in place.
 - 3. Core Insulation will be high density expanded polystyrene fitted between stiles and rails of sub-frame. Core to have compressive strength ASTM D1621 - 25psi density with a nominal R-Value of 6.5.
 - 4. Thermal Barrier, IBC, Bocca code core liner sheet option for doors will be a .032 aluminum sheet placed between the layer of core insulation and the inside door face sheet.
 - 5. Face Sheet to be fiberglass reinforced polyester (FRP) with an abuse resistant surface and U.V.- additives to aide in the protection against normal weathering and normal usage.
 - a. Face Sheet to be .120 Thickness
 - b. Standard Face sheet to be color throughout. Custom color optional face sheets to be specially designed to accept specially formulated paint products, color to match selected color.
 - c. Face sheet to have patterned pebble embossed texture.
- E. Vision Light (cut-outs) to be specifically made to accept options for ¼" or 1" Glass. Glass types are determined under the related glass and glazing sections.

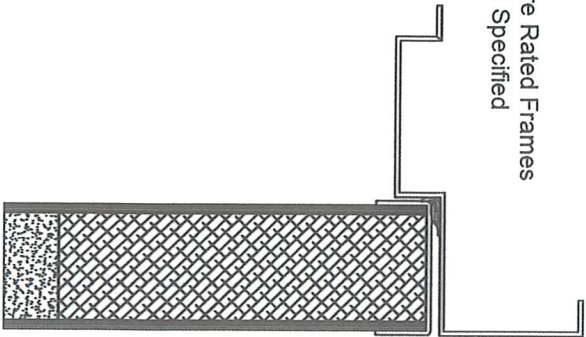
FRP ARCHITECTURAL DOORS INC.

Phone: 215-244-1818

2424 State Road – Building 8 Bensalem, Pa. 19020

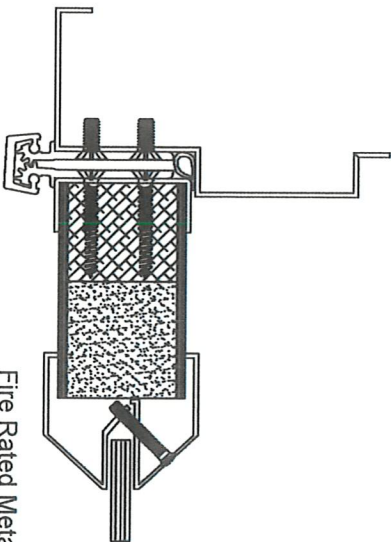
www.FRPARCH.com

Fire Rated Frames
as Specified



1
FD-1

FR90 Door
Top Rail
5" Closer Blocking



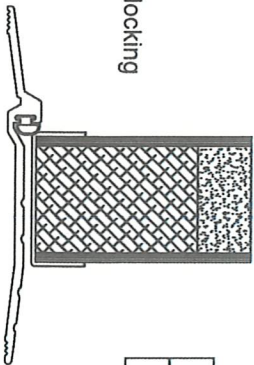
3
FD-1

FR90
Hinge Stile

Fire Rated Metal Vision lights
Primed Metal or Optional Stainless Steel

90 Minute Mineral Core

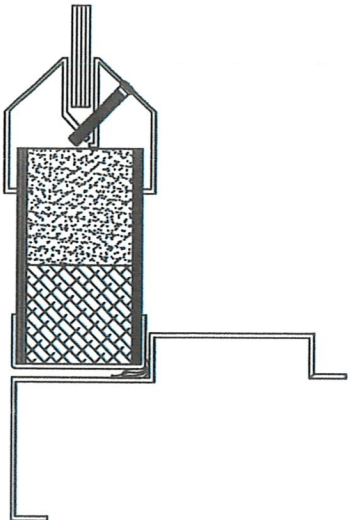
Perimeter Blocking



2
FD-1

FR90 Door
Bottom Rail

*Weatherstrip smoke gaskets are by Hardware Supplier
*Threshold by others-see hardware schedule



2
FD-1

FR90 Door
Lock Stile

Perimeter Stainless Steel Edges
Factory Sealed and Secured Place

Product Specifications: FRP Architectural Doors Inc. FR90 Fire Rated FRP Door Series

Part 1 General – Division 8 - Section 08220 Flush FRP Faced Fire Doors

1.1 Section Includes

- A. FRP Fiberglass Clad Faced Fire Doors

1.2 Related Sections

- A. Section 08710 Fire Rated Door Hardware
- B. Section 08800 Fire Rated Glass and Glazing
- C. Hollow Metal Fire Rated Frames
- D. Stainless Steel Fire Rated Frames

1.3 Related Testing

- A. NFPA-80 (252) Fire Testing for assemblies and devices used to protect openings in walls against the spread of fire and smoke within, into, or out of buildings
- B. UL / UL10C Underwriters Testing Laboratory / Positive Pressure Testing
- C. UBC Standard 7-2 Fire Testing for Door Assemblies
- D. Intertek ETL Listing Independent Testing Laboratory
- E. ASTM E 84 Surface Burning Characteristics of Building Materials.

2.1 Products: Fire Rated FRP Clad Faced Fire Door Assembly

- A. Provide door assemblies that have been fabricated to comply with specified performance requirements as demonstrated by testing manufacture's corresponding standards.

2.2 Manufacturer

- A. FRP Architectural Doors Inc. - 215-604-1545 - www.FRPARCH.com
- B. Approved Equal – Subject to compliance with product requirements and the owner's decision of a requested substitution.

2.3 FRP Flush Fire Rated Doors

- A. Standard Wall Door Series FR90; 1-3/4" thick flush door with fiberglass reinforced polyester (FRP) face sheets.
- B. FRP Face sheets are .120 Thickness, color thru-out, Pebble Embossed Texture
 - 1. Class A FRP; Flame Spread Maximum 25, Smoke Development Maximum 450.
 - 2. Class C FRP; Flame Spread Maximum 200, Smoke Development Maximum 450.
- C. Doors to be Fire Rated in compliance with U.L. or approved equal.
 - 1. Ratings to be 45 minute; 60 minute or 90 minute as scheduled.
- D. 1-1/2" Internal Perimeter and Hardwood Blocking Reinforcements are required to support door hardware, hinges, closers and latching.
- E. Doors core for Interior or Exterior 90 Minute Rating to be Mineral, 30lb PCF Density; 1-1/2" Thickness
- F. Optional Interior door core to be 45 Minute Rating to be Particle, 32lb PCF Density; 1-1/2" Thickness
- F. Stainless Steel Perimeter Channel for exterior doors, to be sealed, 304 grade, 3/4" x 1 7/8" wide.
- G. Optional Matching FRP edges around perimeter for interior doors to be used on all 4 sides.
- H. Vision Lights and Louvers are to be metal; by Air Louver Inc. or approved equal. All metal lights and louvers to be fire rated.

3.1 Installation

- A. Factory Prep doors for cutouts and mortised door hardware.
- B. Install doors into fire rated framing per manufacturer's instructions.
- C. Field Install door hardware and adjust for smooth operation.

3.2 Warranty

- A. Provide 10 year warranty Period.

FRP ARCHITECTURAL DOORS INC.

Phone: 215-604-1545

501 Cambria Ave-Suite 102 Bensalem, Pa. 19020

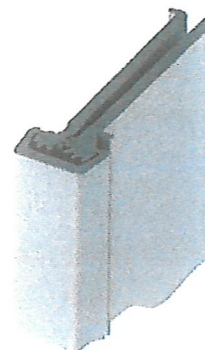
www.FRPARCH.com

780-224HD

Heavy Duty Concealed Leaf Hinge

Application:

- Lead lined model for hospital x-ray room doors with double row of screws to straddle lead (specify "LL")
- Door edge protection lip
- Frame leaf alignment rib for proper hinge and door location
- 3/32" (2 mm) inset



PRODUCT SPECIFICATIONS

CERTIFICATIONS:

- Conforms to ANSI A156.26 for A31031G

CLEARANCE:

- 5/16" (8 mm) hinge side
- Plus standard lockside clearance

FASTENERS:

- #12-24 X 11/16" Flat Head Self-Drill Screws

LENGTH OPTIONS:

- Standard and Custom

DOOR REINFORCEMENT:

- None required to 200 lbs. Heavier weight use 16-gauge channel.

FRAME REINFORCEMENT:

- None required to 200 lbs. Heavier weight use 16-gauge channel.

FIRE RATING:

- Up to 3 hr. metal and 90 min. wood composite (with studs)

WARRANTY:

- All Roton products have a lifetime warranty. When ordering electric Roton, the electric portion of the hinge has a one-year warranty.

MATERIAL:

- Aluminum 6063-T6

ELECTRIC

MODIFICATIONS:

- Power Transfer Preparation (EPT 2) or (EPT 10)
- Exposed Electric Contacts (E)
- Exposed Electric Switches (EIS)
- Electric Through-Wire (ETW)
- Electric Monitoring (EMN)
- Electric Through-Wire and Monitoring (ETM)
- Removable Electric Through-Wire (RETW)

PRODUCT SIZE OPTIONS

| LENGTH (INCHES) | LENGTH (CM) | HOLE COUNT (DOOR) | HOLE COUNT (JAMB) |
|-----------------|-------------|-------------------|-------------------|
| 79 | 200.7 | 15 | 15 |
| 83 | 210.8 | 19 | 19 |
| 85 | 215.9 | 19 | 19 |
| 95 | 241.3 | 19 | 19 |
| 119 | 302.3 | 21 | 21 |



Yale

8800 Series

Grade 1 Mortise Locks



never compromise

The value of any product is equal to the quality of the labor and materials put into making it. And the Yale® 8800 series mortise lock is a perfect example that true quality doesn't just happen. Meticulous design and engineering have gone into manufacturing a mortise lock that brings you versatility as well as uncompromising strength and durability.

With quick lever handing and a quick reversible latchbolt, lockset handing takes only seconds. Add a standard non-handed curved lip strike, and you have a no-hassle mortise lock that's quick and easy to install.

When it comes to strength, the Yale® 8800 series brings a new measure of security to the door. Its 1" throw stainless steel deadbolt extends further back into the reinforced steel case when in the locked position, providing added stability and resistance to abuse. Solid trim packages also provide deterrence to vandalism, making the 8800 series a prime player in your total opening security package.

For over 160 years, Yale Locks and Hardware has built a reputation on manufacturing products that exceed expectations of quality and reliability. The Yale 8800 series mortise lock is no exception, and to demonstrate that quality proves itself, we back it with a 10-year mechanical warranty.

We won't compromise, and neither should you.

8800

The Yale 8800 series mortise lock is an industry standard product. Suitable for installation on doors 1-3/4" to 3-1/4" thick with standard trims, these products have a 1" throw stainless steel deadbolt. The anti-friction one-piece latchbolt is stainless steel and has a 3/4" throw.

finishes

The Yale 8800 series mortise lock is available in the trim finishes as listed. All knobs, lever handles, roses, escutcheons, cylinder collars and other exposed parts are fabricated of either brass, bronze, stainless steel or zinc and will be compatible with the finish ordered. When ordering, specify the finish required by the ANSI/BHMA Code Number only. When locksets are ordered with different trim finishes on each side, specify the outside finish first, i.e. COR8817-2 x 612 x 625. The front and strike finish will match the inside finish unless specified otherwise.

camden escutcheon

8800 series locks with escutcheon trim are provided standard with the Camden (CN) escutcheon. This zinc die cast escutcheon features one-piece casting for superior strength. Locks with this escutcheon are ANSI/BHMA certified operational and security Grade 1 and will retrofit to existing Yale escutcheon preps. The aesthetics of the CN escutcheon provide a design continuum with Yale exit device trim for a consistent look throughout the facility.

windstorm

Certified (refer to local codes).



Hurricane

warranty

Yale 8800 series mechanical mortise locks carry a ten (10) year warranty and 8800 series electrified mortise locks carry a two (2) year warranty.

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| ANSI/ BHMA Code | Finish Description |
|-----------------------|---|
| 605 | Bright Brass, Clear Coated |
| 606 | Satin Brass, Clear Coated |
| 609 | Satin Brass, Blackened, Satin Relieved, Clear Coated |
| 611 | Bright Bronze, Clear Coated |
| 612 | Satin Bronze, Clear Coated |
| 613 | Dark Oxidized Satin Bronze, Oil Rubbed ¹ |
| 613E | Dark Oxidized Satin Bronze - equivalent |
| 616 | Satin Bronze, Blackened, and Satin Relieved, Clear Coated |
| 618 | Bright Nickel Plated, Clear Coated |
| 619 | Satin Nickel Plated, Clear Coated |
| 620 | Satin Nickel Plated, Blackened, Satin Relieved, Clear Coated |
| 625 | Bright Chrome Plated |
| 626 | Satin Chrome Plated  |
| 629 | Bright Stainless Steel |
| 630 | Satin Stainless Steel  |
| 693 | Black Painted |
| 722 | Black Oxidized Bronze, Oil Rubbed ² |

1. New May 1, 2010

2. Formerly 613 prior to May 1, 2010



Finish available with MicroShield® antimicrobial coating, additional finishes by special application. Consult factory for availability.

features

A.D.A.

The 8800FL meets accessibility guidelines of the Americans with Disabilities Act and the requirements of the Uniform Federal Accessibility standards and ANSI 117.1, all requiring ease of accessibility for the handicapped.

ANSI/BHMA

Certified ANSI/BHMA A156.13, Series 1000, Operational Grade 1 (8800FL with CN escutcheon & SL8800 meet Security Grade 1).



bevel front

Yale 8800 series fronts are free-floating to adjust from flat to the standard bevel of 1/8" in 2".

door thickness

8800 series mortise locks are supplied as standard for 1-3/4" thick doors. For other than standard, specify the door thickness on the order: (i.e. 2", 2-1/4", etc.)

installations

8800 series mortise locks conform to ANSI/BHMA Specifications A156.115 which cover hardware preparations for steel doors and steel frames and A156.115-W which cover hardware preparations for wood doors with wood or steel frames.

microshield®

8800 series locks are available with MicroShield® antimicrobial coating. *MicroShield* is a revolutionary hardware finish coating, using a silver ion based technology, which inhibits the growth of bacteria, algae, yeast, fungus, mold and mildew. *MicroShield* is non-toxic and lasts for the lifetime of the finish to which it is applied. To order, suffix option code "YMS".



Note: *MicroShield*® coating may vary finish color from architectural standards. *MicroShield* is not intended as a substitute for traditional infection control programs such as hand hygiene or use of disinfectants. Coated product must still be cleaned to insure the surfaces will be free of destructive microbes. Yale Locks & Hardware makes no representations or warranties, express or implied, as to the efficacy of the *MicroShield* antimicrobial.

ISO 9001

Designed and manufactured under a certified ISO 9001 quality system.

knurled designs

Where required by the local authority, trim can be knurled to be identifiable to the touch for blind persons. All knob designs except CA may be ordered knurled; all lever designs except designer trim and Reflections® trim (pages 9 & 11) may be ordered knurled.

Only the outside knob or lever will be knurled or abrasive coated unless specified otherwise. To order a complete lockset knurled or abrasive coated, suffix the lockset model number with "Knurled" or "Abrasive Coated," i.e. LF x CN8807 x "Knurled," LF x CN8817-2 x "Knurled Inside Only," AU x CN8828FL "Abrasive Coated."

lead shielding

All Yale 8800 series mortise locks are available with a lead shield for installation in lead-lined doors. To order, suffix the lockset model number with "lead-lined."

quick reversibility

Yale mortise locks with the same trim on both sides (knob x knob or lever x lever) are field reversible. These locks can be converted to accommodate the hand of the door. However, to reduce installation costs, it is recommended that the hand of the door be specified for each lockset ordered. If the hand of the door is not specified, RH will be furnished.

underwriters laboratories (UL - cUL)

Yale 8800 series mortise locks have been listed by Underwriters Laboratories Inc. for use on fire doors having a rating up to and including 3 hours and for use on 20 minute wood doors. This pertains to single swing doors not exceeding 4 feet in width and 8 feet in height and in doors mounted in pairs not exceeding 8 feet in either direction (unless otherwise noted in the individual listings.)

In general, single-point mortise locks or latches with 3/4" minimum latch throw are intended for the active leaf of doors mounted in pairs, with the inactive leaf provided with top and bottom flush or surface bolts of the manual, automatic, or self-latching type. The door Classification Marking specifies the minimum latch throw required for the individual door.

Yale 8800 series mortise locks with 3/4" throw latchbolts may also be used on single swing doors rated 1-1/2 hours or less, up to 4 feet in width and 9 feet in height. This is in addition to the rating mentioned above. All Yale 8800 Series Mortise Locks with Lever Handle Trim are UL listed for fire door applications. Underwriters Laboratories does not list locks with rabbeted fronts, locks with deadbolt only, or locks with hold-back feature on the latchbolt.

Note: Any retrofit or other field modification to a fire rated opening can potentially impact the fire rating of the opening, and Yale Locks & Hardware makes no representations or warranties concerning what such impact may be in any specific situation. When retrofitting any portion of an existing fire rated opening, or specifying and installing a new fire-rated opening, please consult with a code specialist or local code official (Authority Having Jurisdiction) to ensure compliance with all applicable codes and ratings.



rim

7100(F)

The 7100(F) is a rim exit device to be used with single doors or pairs of doors constructed of metal, wood or composite materials. Designed for application in high-use areas, the 7100(F) comes in a variety of finishes and can be combined with a variety of trims to match any desired style.



certification/compliance

UL/cUL Listed: FVSR/FVSR7 - Panic hardware
GXHX/GXHX7 - Fire exit hardware (F)
(4' x 8' single, 8' x 8' pairs, 3 hr.)

ANSI/BHMA Certified: A156.3 Type 1, Grade 1 

features

- Designed for wide stile doors
- 3/4" throw deadlocking stainless steel pullman latchbolt
- Electroplated ferrous components provide corrosion resistance
- Available in double cylinder function (handing must be specified)

applications

- Non-handed for easy installation
- Single swing doors
- Pairs of doors with removable mullions
- Metal, wood or composite door materials

specifications

| | |
|----------------------|--|
| Door Opening Width: | -24 for 24" (60cm) doors -36 for 30" - 36" (76cm - 91cm) doors -48 for 36" - 48" (91cm - 122cm) doors Optional sizes can be special ordered. Consult Technical Product Support. |
| Door Thickness: | 1-3/4" (44mm) standard. Optional door thicknesses available to 4-1/2"; specify door thickness when ordering. |
| Minimum Stile Width: | 4-1/2" (114mm) |
| Projection: | 3-1/4" (83mm) active, 2-3/4" (70mm) dogged |
| Latchbolt: | 3/4" (19mm) deadlocking stainless steel pullman-type |
| Strike: | 757F, 793 optional (double door application, panic only) |
| Fasteners: | Machine screws and wood door fasteners standard for panic hardware. Sex nuts and bolts supplied standard for fire exit hardware. |
| Trims: | 620F series escutcheon trim, 630F series pull/thumbpiece trim, 680F series offset pull trim, 540F series rose trim, 121NL cylinder only. See pages 27-29. |
| Dogging: | Hex key dogging supplied standard on panic devices |
| Options: | Cylinder dogging, shim kit #723, sex nuts and bolts, MicroShield®, Lumi-Lite® |
| Warranty: | 5-year limited |



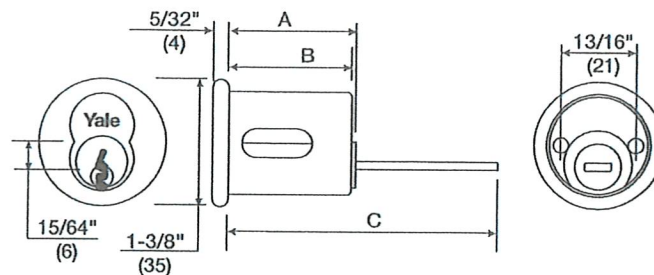
Rim Cylinders

LARGE FORMAT INTERCHANGEABLE CORE (LFIC) FOR CURRENT PRODUCTS

Includes standard, hotel, security and high security large format interchangeable core for rim lock and exit device trim applications. When ordering interchangeable core cylinders or cores only, control keys are not furnished. If control keys are required, they must be specified.



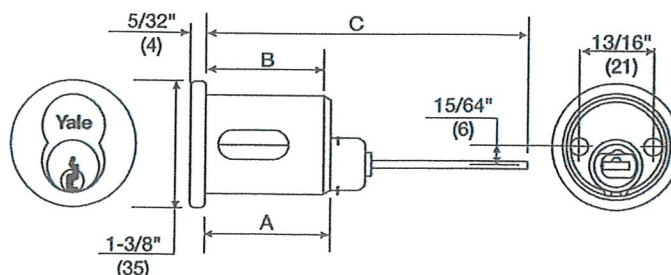
| Model Numbers | | | Description | No. of Active Pins | Dim A | Dim B | Dim C Tailpiece Model Numbers | |
|-------------------|-----------|--------------|-------------------|--------------------|--------------|--------------|----------------------------------|---------------|
| Complete Cylinder | Core Only | Housing Only | | | | | #1145 | #1147 |
| 1193 | 1210 | 1212 | Standard cylinder | 6 | 1-7/16" (37) | 1-3/8" (27) | 2-15/16" (75) | 3-3/4" (95) |
| 1193 | 1220 | 1212B | Standard cylinder | 7 | 1-5/8" (27) | 1-9/16" (40) | 3-1/8" (79) | 4-5/16" (110) |
| 5193 | 5210 | 1212 | Security cylinder | 6 | 1-7/16" (37) | 1-3/8" (27) | 2-15/16" (75) | 3-3/4" (95) |
| 5193 | 5220 | 1212B | Security cylinder | 7 | 1-5/8" (27) | 1-9/16" (40) | 3-1/8" (79) | 4-5/16" (110) |



LARGE FORMAT INTERCHANGEABLE CORE (LFIC) WITH LAZY CAM OPERATION

| Model Numbers | | | Description | No. of Active Pins | Dim A | Dim B | Dim C |
|-------------------|-----------|------------------|---|--------------------|-------------|-------------|-------------|
| Complete Cylinder | Core Only | Housing Assembly | | | | | |
| 1193L | 1210 | * | Standard cylinder with lazy cam operation | 6 | 1-3/4" (44) | 1-3/8" (35) | 3-1/2" (89) |

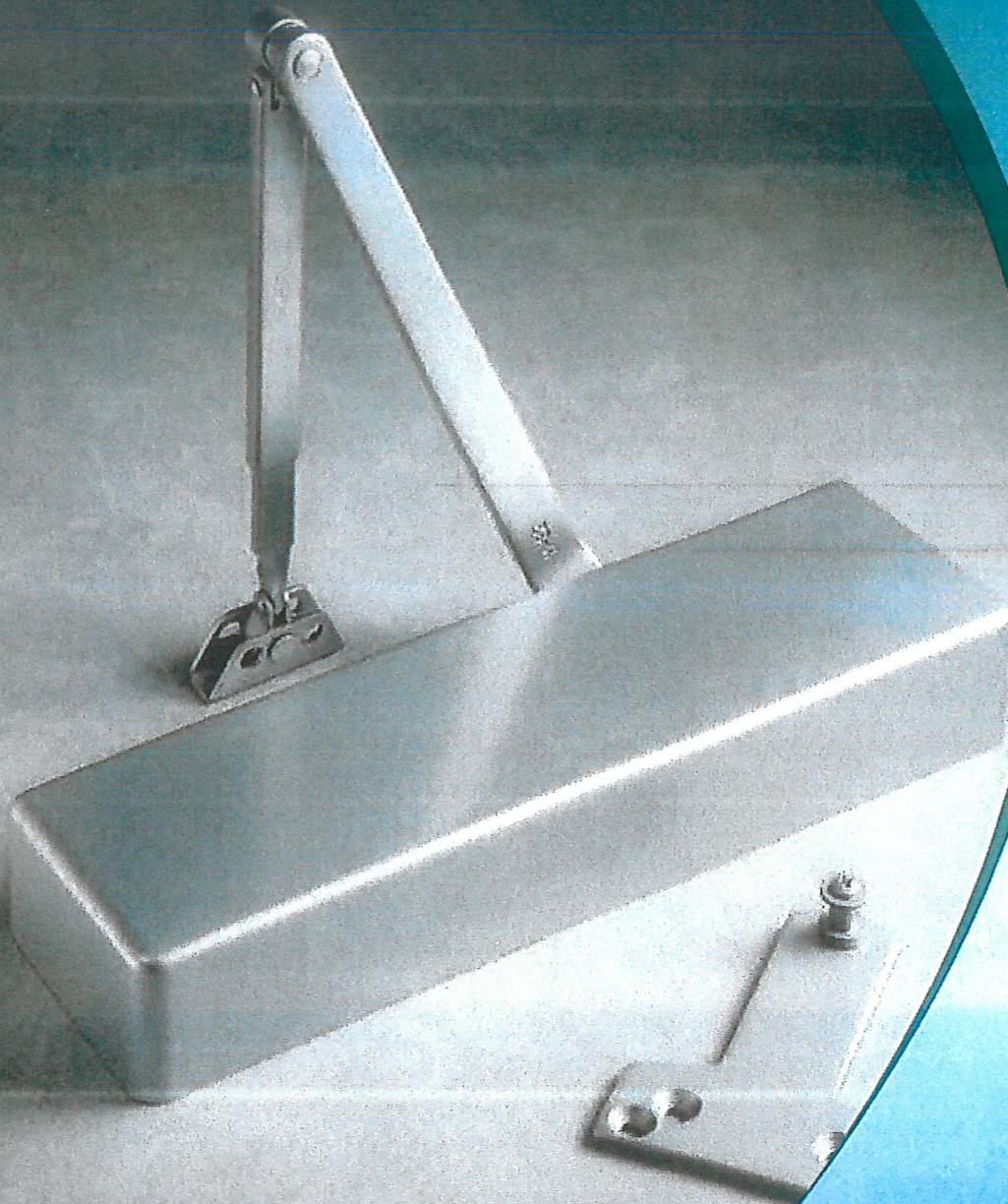
*Uses 1212 housing with lazy cam. Specify by part number 10-1193-0044 x Finish



Dimensions are shown in inches (millimeters)

7500 SERIES

Institutional Door Closer



Norton®
ASSA ABLOY

ASSA ABLOY, the global leader
in door opening solutions

SEALANTS

M66 MODIFIED POLYURETHANE CONSTRUCTION SEALANT

PRODUCT NAME

CRL M66 Modified Polyurethane One Component Elastomeric Construction Sealant with a Grainy Texture Appearance.

PRODUCT DESCRIPTION

CRL M66 is a one-part, medium modulus, moisture curing sealant. CRL M66 offers excellent primerless adhesion on most common construction surfaces, including Kynar™ and coated metals.

CRL M66 CONFORMS TO AND PASSES:

- Federal Specification TT-S-00230C, Type II, Class A.
- ASTM C920-98, Type S, Grade NS, Class 25, Use NT, M, T, A, G, and O.
- ASTM C510, ASTM C639, ASTM C661, ASTM C679, ASTM C717, ASTM C719, ASTM C793, ASTM C794, ASTM C1183, ASTM C1193, ASTM C1246, ASTM D412, ASTM D624, and ASTM G155.
- CAN/CGSB-19, 13-M87, Type MCG-2-25-A-N, QPL # 81026.
- AAMA 808.3-92 Exterior Perimeter, AAMA 802.3-92 Type II Ductile Back Bedding Compound.
- USDA approved for use in meat and poultry areas.

USES

CRL M66 Modified Polyurethane Construction Sealant is specially formulated to outperform traditional VOC solvent polyurethanes for sealing moving joints in concrete, masonry, metal, and other basic perimeter joint applications. It is ideal for all joints between framing (door and window) and the building structure in both storefront and curtain wall applications to secure a watertight installation. This advanced polymer formula offers excellent adhesion to fluoropolymer paint coatings for metal surfaces including Kynar™, Duranar®, and Duranar® Sunstorm™ Coatings, as well as standard metal, aluminum, steel, galvanized steel, plastics, vinyl, glass, wood, concrete, brass, and other common building substrates.

CRL M66 has been used in manufacturing uses such as production of travel trailers, motor homes, mobile homes, and modular prefab houses. Heating and air conditioning companies use CRL M66 on galvanized duct components.

This Eco-Friendly sealant contains no solvents or isocyanates, and is VOC compliant.

FEATURES

- Exceptional adhesion to Kynar™ coated metals.
- VOC Compliant - only 9 g/L (Chemically curing < 3%).
- Eco-Friendly Product - Solvent-Free, Isocyanate-Free, VOC Compliant, Qualifies for LEED Credit for Section EQ (Indoor Environmental Air Quality).
- Low temperature gunning and application above 0°F (18°C).

- Service temperature from -75°F to 300°F (-59°C to 149°C).
- Permanently Flexible - Will not get hard with age like traditional polyurethanes. Remains flexible in low temperatures.
- Fast Cure - Skins over in 30 minutes and continues to cure at a rate of 1/8 inch (3 mm) depth per day.
- Tooling time - approximately 20-40 minutes, depending on temperature and humidity.
- Paintable - Can be painted in only two hours with water-based paints.
- UV Resistant - Will not turn yellow from exposure to the sun.

LIMITATIONS

CRL M66 is not recommended for:

- Horizontal decks, patios, driveway or terrace joints where abrasion or physical abuse is encountered.
- Interior or exterior sealing below the waterline in marine applications.
- Surfaces with special protective or cosmetic coatings without prior consultation of the manufacturer. Such surfaces include, but are not limited to mirrors, reflective glass, surfaces coated, polyethylene or polypropylene.
- CRL M66 should not be applied with wet tooling techniques or by using solvents. Water or detergent/soap solutions are not recommended.
- CRL M66 should not be applied to unpredictably absorptive surfaces such as marble, limestone or granite unless a standard of appearance has been agreed on as a result of testing for stain and/or discoloration.

TECHNICAL DATA

The physical properties of CRL M66 Polyurethane are shown in Table 1.

TABLE 1 - PHYSICAL PROPERTIES

| Property/Test Methods | Value |
|---|--|
| Shore A Hardness - Durometer | 35 ± 5 |
| Tensile Strength, ASTM D-412-68 | 380 psi |
| Elongation (Ultimate), ASTM D-412-68 | 675% |
| Shrinkage | Nil |
| Weatherometer Atlas Xenon Arc | No Change (4500 hrs) |
| Adhesion-in-Peel | Aluminum-25 ± 3 pli Concrete-25 ± 3 pli Brick-20 ± 3 pli |
| Low Temperature Flexibility, ASTM D-746 | -10°F |
| Extrusion Rate | 35g/min. ± 5, modified 1/8" orifice |
| Service Temperature Range | -75° - 300°F (-59° - 149°C) |
| Movement Capability | ± 25% |

CRL
ALUMINUM
JANUARY 2013
(Supersedes October 2007)

7
SEALANTS
Polyurethane

JANUARY 2013
(Supersedes October 2007)

CRL
ALUMINUM

COVERAGE

The following tables indicate the approximate number of linear feet filled by one gallon or one 10.1 fluid ounce cartridge.

ESTIMATING REQUIREMENTS

| APPROX. LINEAR FEET PER GALLON | | | | | | | | |
|--------------------------------|-------------|------|------|------|------|------|----|--|
| Depth | Joint Width | | | | | | | |
| | 1/4" | 3/8" | 1/2" | 5/8" | 3/4" | 7/8" | 1" | |
| 1/4" | 288 | 216 | 144 | 120 | 96 | 84 | 72 | |
| 3/8" | - | 144 | 96 | 84 | 72 | 60 | 48 | |
| 1/2" | - | - | 72 | 60 | 48 | 36 | 24 | |

| APPROX. LINEAR FEET PER CARTRIDGE | | | | | | | | |
|-----------------------------------|-------------|------|------|------|------|------|----|--|
| Depth | Joint Width | | | | | | | |
| | 1/4" | 3/8" | 1/2" | 5/8" | 3/4" | 7/8" | 1" | |
| 1/4" | 24 | 18 | 12 | 10 | 8 | 7 | 6 | |
| 3/8" | - | 12 | 8 | 7 | 6 | 5 | 4 | |
| 1/2" | - | - | 6 | 5 | 4 | 3 | 2 | |

| APPROX. LINEAR FEET PER SAUSAGE | | | | | | | | |
|---------------------------------|-------------|------|------|------|------|------|----|--|
| Depth | Joint Width | | | | | | | |
| | 1/4" | 3/8" | 1/2" | 5/8" | 3/4" | 7/8" | 1" | |
| 1/4" | 48 | 32 | 24 | 19 | 16 | 14 | 12 | |
| 3/8" | - | 21 | 16 | 13 | 11 | 10 | 8 | |
| 1/2" | - | - | 12 | 10 | 8 | 6 | 5 | |

PRINCIPLES OF JOINT DESIGN

A variety of factors are considered when designing the joint width and depth. The main areas of concern are maximum expansion, surface materials and their expected thermal change.

When possible, CRL M66 Modified Polyurethane Construction Sealant should be applied when the joint is at its median opening, so as to obtain the greatest efficiency with joint movement. The dimensions of the joint must be established according to expected movement, number and location of joints. The design should be such that movement on any joint should not exceed $\pm 25\%$ maximum. This joint size can be calculated by determining the expected movement within the joint between the high and low temperature extremes and multiplying the change by a factor of four. For example, it is determined the joint will open and close $1/4"$ between temperature extremes, it follows, $4" \times 1/4" = 1"$. The example joint should be a minimum of 1" wide. The depth of the sealant is also a very important consideration. The standard rule of thumb is that the depth should be half the width of the joint, with a maximum depth of $1/2"$ and a minimum of $1/4"$. See Figure 1 and Table 2 for these illustrations.

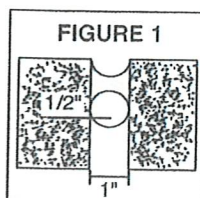


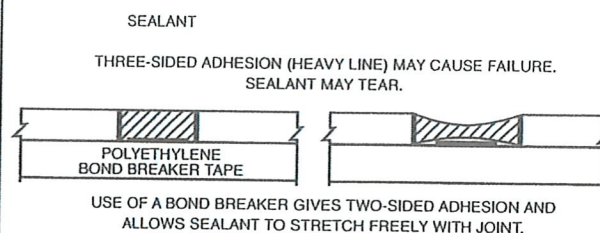
TABLE 2 - JOINT WIDTH AND SEALANT DEPTH

| Joint Width | Sealant Depth At Midpoint |
|--------------|---------------------------|
| 1/4" to 1/2" | 1/4" |
| 1/2" to 1" | 3/8" to 1/2" |
| 1" to 2" | 1/2" |

In deep joints, the sealant depth should be controlled by the use of backer rod. Other caulks should not be used as fillers. Where depth of joint will prevent use of joint backing, an adhesive backed polyethylene tape must be installed to prevent three sided adhesion. Backer Rod is installed by compressing and rolling it into joint channel without stretching lengthwise. The rod must conform to the manufacturer's recommendations as to size in relationship to joint width. Do not puncture during installation when using closed cell backer rod, and backing must be dry at time of sealant application.

Figure 2 illustrates the use of a bond breaker to prevent three- sided adhesion.

FIGURE 2 BOND BREAKER



INSTALLATION

CLEANING

All surfaces where sealant is going to be applied must be dry, clean, free of loose particles, oil, grease, asphalt, tar, wax, rust, waterproofing coatings, mold release agents, and membrane materials, etc.

- MASONRY:** Concrete, stone and other masonry must be cleaned with wire brushing, grinding, or sandblasting. A sound surface free of contamination must be achieved before sealant application.
- METAL:** Metal finishes should be tested for adhesion on all new construction. Scale, rust, oils, grease, oxide, and protective lacquer coatings must be removed prior to sealant application. When using solvents on job sites all E.P.A. recommendations for handling and safety must be followed. Any chemical residue or film must be removed prior to sealant application. Reference S.W.I. and NGA manuals for standard industry cleaning procedures.

PRIMING

M66 is typically applied without the need for any primer. Excellent adhesion to most common building materials, including Kynar™ coated metals.

APPLICATION

Apply CRL M66 using a professional sealant gun loaded at the job site. CRL M66 maintains excellent gunnability over a broad temperature range. Joint should be filled from bottom up. Proper size nozzle and gun angle are extremely important when applying sealant to assist in the wetting out process. Install back-up material or joint filler, spacer shims and tapes as specified. Apply CRL M66 in a continuous operation using a positive pressure adequate to properly fill and seal the joint. Tool the sealant with adequate pressure to spread the sealant against the back-up material and onto the joint surfaces.

A tool with a concave profile is recommended to keep the sealant within the joint.

Excess sealant should be dry-wiped from all surfaces while still uncured, following with a commercial solvent such as mineral spirits, or isopropyl alcohol. Should CRL M66 accidentally begin to cure on adjacent porous surfaces, the excess sealant should be allowed to progress through the initial cure or set-up. It should be then removed promptly by abrasion or other mechanical means.

APPLICATION TEMPERATURE

Moisture on substrates will adversely affect adhesion and can be found at temperatures below 40°F (4°C). Methyl ethyl ketone (MEK) is soluble in water and may be more appropriate for winter cleaning as it helps in removing condensation and frost. CRL M66 Modified Polyurethane Construction Sealant maintains excellent gunnability over a broad temperature range. At 75°F (23°C), 50% Relative Humidity, a durable skin forms in 30 minutes. Curing continues at the rate of 1/8 inch (3 mm) depth per day. The cure rate is reduced at lower temperatures and less humidity. After a complete cure, all chemical components of M66 can be considered inert.

CLEAN-UP

Immediately after use and before sealant has cured, equipment must be cleaned with mineral spirits, or isopropyl alcohol. The cured sealant may be removed by cutting with sharp-edged tool; thin films removed by abrading.

CURED SEALANT IS USUALLY VERY DIFFICULT TO REMOVE WITHOUT ALTERING OR DAMAGING THE SURFACE TO WHICH THE SEALANT HAS BEEN MISAPPLIED.

PACKAGING

CRL M66 Modified Polyurethane Sealant is packaged in 10.1 oz. (300 ml) cartridges, 30/case, and 20 fl. oz. (600 ml) sausages (15/case). Also available upon request are 2 and 5 gallon pails.

PRECAUTION

Uncured sealant may irritate the eyes. Avoid contact with eyes and skin. Contact lens wearers take appropriate precautions. IN CASE OF CONTACT, FLUSH EYES WITH WATER, CALL A PHYSICIAN. Remove from skin with dry cloth or paper towel. KEEP OUT OF THE REACH OF CHILDREN. REFER TO MATERIAL SAFETY DATA SHEET FOR FURTHER INFORMATION.

SHELF LIFE

When stored at or below 80°F (27°C), CRL M66 Modified Polyurethane has a shelf life of one year from date of manufacture.

MAINTENANCE

No maintenance should be needed. If sealant becomes damaged, replace damaged portion. Clean surfaces in damaged area and repair with fresh CRL M66 Modified Polyurethane Construction Sealant.

COLORS

9 standard colors and 23 CRL/U.S. Aluminum special colors. Custom colors available upon request.

TECHNICAL SERVICE

Complete technical information and literature is available from C.R. Laurence Co., Inc. Any technical advice furnished by the company or any representative of the company concerning any use or application of any sealant is believed to be reliable, but the company makes no warranty, expressed or implied, for any use or application for which such advice is furnished.

LIMITED WARRANTY NOTICE

CRL and its manufacturer warrant our products to be of good quality and will replace or, at our election, refund the purchase price of any products proved defective. Satisfactory results depend not only upon quality products but also upon many factors beyond our control in the application process. Therefore, except for such replacement or refund CRL and its manufacturers make no warranty or guarantee, expressed or implied, including warranties of fitness or merchantability, respecting its products. CRL and its manufacturers shall have no other liability with respect thereto. User shall determine the suitability of the product for his intended use and assume all risks and liability in connection therewith. Any authorized change in the printed recommendations concerning the use of our products must bear the signature of the CRL Product Manager.

COOPERATIVE TESTING

Materials submitted for testing should be sent to:

C.R. Laurence Co., Inc.
Technical Sales Department
PO Box 58923
Los Angeles, CA 90058-0923

This program is intended to eliminate potential field problems by pretesting CRL construction sealants with samples of the building materials on which the sealant will be applied. The test will aid in determining the proper surface preparation method, effective solvents for cleaning and whether priming is necessary to achieve optimum adhesion. Following this procedure will remove many of the unknown variables which affect field success.

Test samples of substrates should be identified as to manufacturer, origin, designed use, building project, person and firm originating the request. Appropriate sketches or drawings showing the intended use can be helpful.