

EXTERIOR IMPROVEMENTS & ADA RENOVATIONS

**JOHN SAVAGE HOUSING COMPLEX
8 MARTIN AVENUE
WALLINGFORD, CT 06492
CONTRACT #2020-013**

S/P+A PROJECT NO. 19.050

DATE: June 12, 2020

The following changes to the Drawings and Project Specifications shall become a part of the Drawings and Project Specifications; superseding previously issued Drawings and Project Specifications to the extent modified by ReBid Addendum No. 2.

General Information:

- The deadline for RFIs was Thursday, June 4, 2020, 3:00pm.
- See attached Substitution Requests. (12)

The bid date remains unchanged by this addendum.

The addendum consists of thirteen (13) pages of 8½” x 11” text.
End of ReBid Addendum ‘2’

SUBSTITUTION REQUEST

(During the Bidding/Negotiating Stage)

Project: <u>John Savage Housing Complex</u>	Substitution Request Number: _____
<u>Wallingford Housing Authority</u>	From: <u>Door Security Solutions of New England</u>
To: <u>Silver/Petrucci + Associates</u>	Date: <u>June 4th, 2020</u>
<u>3190 Whitney Ave, Hamden, CT</u>	A/E Project Number: <u>2020-013</u>
Re: _____	Contract For: <u>Wallingford Housing Authority</u>
Specification Title: <u>Door Hardware</u>	Description: <u>Exit Devices</u>
Section: <u>087100</u> Page: <u>5</u>	Article/Paragraph: <u>2.6 Exit Devices and Auxiliary Items</u>

Proposed Substitution: Corbin Russwin ED5000 Exit Devices
 Manufacturer: Corbin Russwin Address: 225 Episcopal Road, Berlin, CT Phone: 8602257411
 Trade Name: Architectural Hardware Model No.: ED5000

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: Bill Peterman
 Signed by: _____
 Firm: Kelahr Associates – DSS of New England

 Telephone: 8602249234

A/E's REVIEW AND ACTION

- Substitution approved - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
- Substitution approved as noted - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
- Substitution rejected - Use specified materials.
- Substitution Request received too late - Use specified materials.






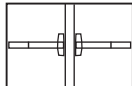
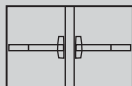
Signed by: **R. Bouchard** Date: **06.04.2020**

Function & trim to match Basis-of-Design product.

Supporting Data Attached: Drawings Product Data Samples Tests Reports _____

Applications and Listings

ED5000 Series

Single Door	UL Listing	Maximum Opening (W x H)	Application	
Rim				
ED5200	Panic	4' x *	Surface applied; single-point latching.	
ED5200A	3 Hr.	4' x 8'		
SecureBolt®				
ED5200S	Panic	4' x *	Surface applied; single-point latching.	
ED5200SA	3 Hr.	4' x 8'		
ED5200S x M107	Panic	4' x 8'	Surface applied; single-point latching. Used as components in swinging door windstorm-rated assemblies (refer to local codes).	
ED5200SA x M107	3 Hr.	4' x 8'		
Mortise				
ED5600	Panic	4' x *	Mortised in door; single-point latching.	
ED5600B	1-1/2 Hr.	4' x 9'		
ED5600A	3 Hr.	4' x 8'		
Surface Vertical Rod				
ED5400	Panic	4' x 8'	Surface applied; two-point latching.	
ED5470	Panic	4' x 10'		
ED5470 x M55	Panic	4' x 10'	Surface applied; one-point latching.	
ED5470 x M107	Panic	4' x 8'	Surface applied; two-point latching. Used as components in swinging door windstorm-rated assemblies (refer to local codes).	
Concealed Vertical Rod				
ED5800	Panic	4' x 8'	Rods concealed in door; two-point latching.	
ED5860	Panic	4' x 10'		
ED5860 x M55	Panic	4' x 10'	Rod concealed in door; one point latching.	
Pair of Doors with Removable Mullion				
Rim x Rim				
ED5200 x ED5200 x CR900 Series	Panic	8' x 10'	Two independent active doors with removable mullion.	
ED5200A x ED5200A x CR900 Series	3 Hr.	8' x 8'		
SecureBolt® x SecureBolt®				
ED5200S x ED5200S x CR900 Series	Panic	8' x 10'	Two independent active doors with removable mullion.	
ED5200SA x ED5200SA x CR900 Series	3 Hr.	8' x 8'		
ED5200S x ED5200S x M107	Panic	8' x 8'	Two independent active doors with removable mullion. Used as components in swinging door windstorm-rated assemblies (refer to local codes).	
ED5200SA x ED5200SA x M107	3 Hr.	8' x 8'		

*UL does not set a door height limitation on panic applications.

Rim Features

ED5000 Series

- ED5200** **Panic-Listed Rim Exit Device**
- ED5200A** **3-Hour Fire-Listed Rim Exit Device**
- ED5202** **Panic-Listed Rim Double Cylinder Exit Device**
- ED5202A** **3-Hour Fire-Listed Rim Double Cylinder Exit Device**



Features

Handing

Standard device is non-handed.
Double Cylinder Device is Handed.
Lever trim is handed.

Bar Length

Easily field cut to size.
Standard: 36" (914mm) bar fits 30" - 36"
(762mm-914mm) door.
Optional: 24" (610mm) bar fits 24" (610mm)
door; specify W024.
Optional: 48" (1219mm) bar fits 36" -48"
(914mm-1219mm) door; specify W048.

Door Thickness

1-3/4" (44mm) standard.
Optional: 2" (51mm); specify D200.
Optional: 2-1/4" (57mm); specify D214.

Stile

Minimum width 4-1/2" (114mm).

Latchbolt

3/4" (19mm) throw, stainless steel pullman-
type with stainless steel deadlocking latch.

Materials

Heavy-duty cold-forged steel chassis; heavy-
gauge steel mechanisms, electroplated
for corrosion resistance; finished parts are
brass, bronze or stainless steel; stainless steel
springs; nylon bearings.

Projection

3-1/4" (83mm) active, 2-3/4" (70mm) dogged.

Dogging

Standard on panic devices; single-point 1/4
turn hex key dogging.
Optional: less dogging, specify M51.
Optional: cylinder dogging; specify M52.
Optional: electric dogging; specify M97.
Mechanical dogging not available on fire-
rated devices.

Fasteners

Standard on panic devices: machine screws
and wood door fasteners. Standard on fire-
rated devices: sex nuts and bolts. Optional
on panic devices: sex nuts and bolts for use
on wood, composite, or unreinforced metal
doors; specify M54. Optional wood screws for
use on approved fire-rated solid wood or wood
core doors. Specify M64.

Strike

Surface-mounted 3/8" (10mm) diameter roller
strike, complete with positive locking plate and
shims, assuring low friction relocking for a long,
trouble-free life.

Functions and Trims

Through-bolted lever, knob, pull and
thumbpiece trims available with wide range
of functions; see Trims and Functions, pages
28-35.

Cylinders

Cylinder not included unless specified. See
Quick Codes, page 54.

Removable Mullion

See Mullions, page 49.

Shim Kit

Optional for mounting device over raised vision
light molding; specify M58.

Applications and Listings

See page 4.

Warranty

Five-year limited.

Certification/Compliance

ANSI

Meets A156.3, Type 1, Grade 1.
Meets A117.1 Accessibility Code.

UL/cUL

All devices listed for safety as panic hardware;
devices comply with UL 305 standards for panic
hardware. Three-hour fire-rated devices listed
as fire exit hardware for A label and lesser class
4' x 8' single or 8' x 8' double doors; UL symbol
on active case cover indicates listing.

Any retrofit or other field modification to
a fire rated opening can potentially impact
the fire rating of the opening, and Corbin
Russwin, Inc. 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.

California State Reference Code

This product has been approved by the
California State Fire Marshal pursuant to
section 13144.1 of the California Health and
Safety Code.

NFPA

All exit devices comply with NFPA 101 Life
Safety Code. All fire-rated devices comply
with NFPA 80 Fire Doors and Windows.

ADA

Exit devices, lever trims and pulls comply
with Americans with Disabilities Act.

Finishes

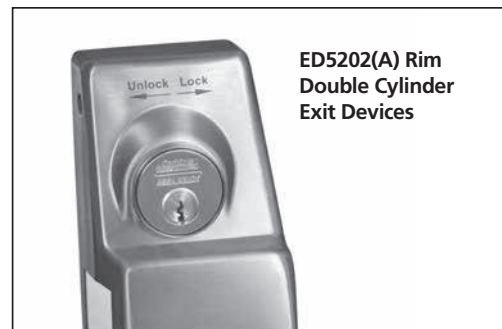
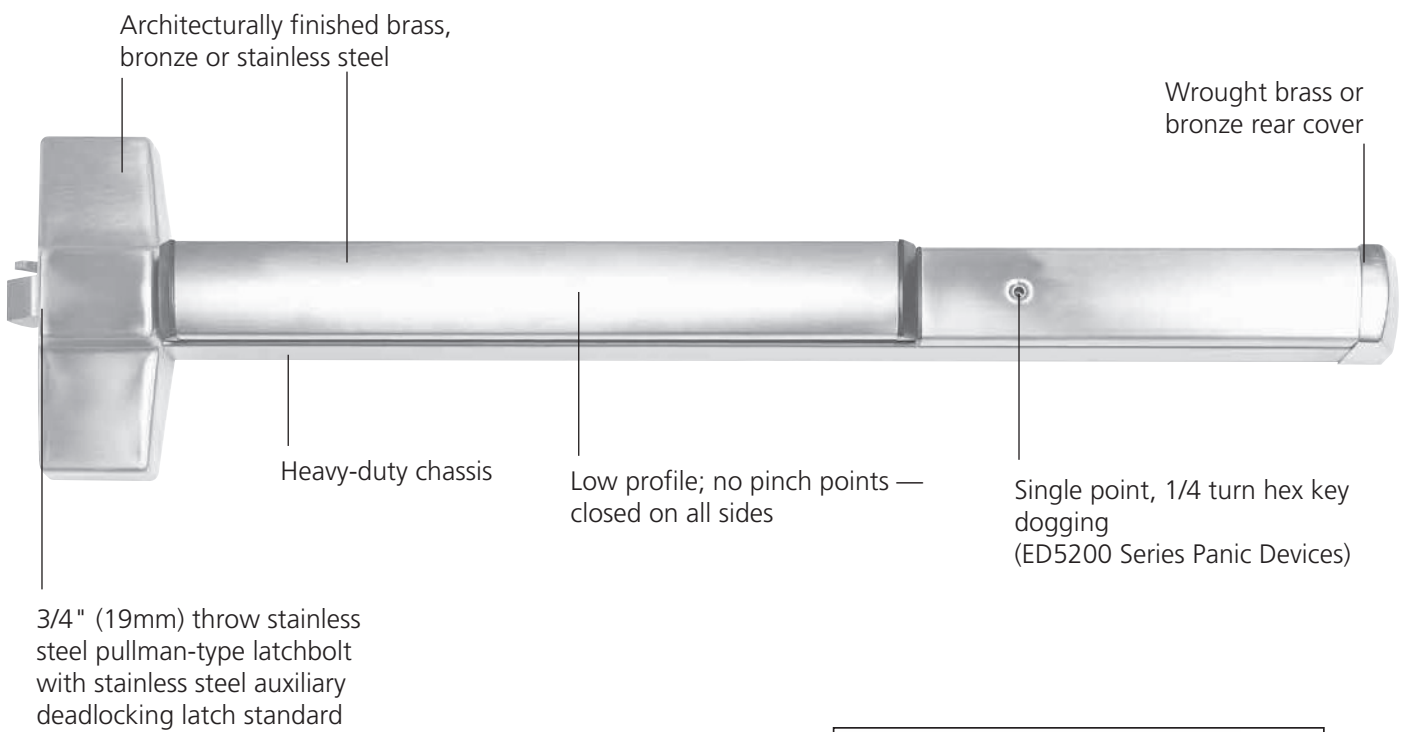
BHMA 605	Bright Brass
BHMA 606	Satin Brass
BHMA 611	Bright Bronze
BHMA 612	Satin Bronze
BHMA 613	Oxidized Bronze, oil rubbed, available lacquered
613E	Dark Oxidized Satin Bronze Equivalent
BHMA 618	Bright Nickel Plated
BHMA 619	Satin Nickel Plated
BHMA 625	Bright Chromium Plated
BHMA 626* (Trim only)	Satin Chromium Plated
626C	Satin Chromium Plated with MicroShield®
BHMA 629	Bright Stainless Steel
BHMA 630	Satin Stainless Steel
630C	Satin Stainless Steel with MicroShield®
722	Black oxidized bronze, oil rubbed
BSP	Black Suede Powder Coat
WSP	White Suede Powder Coat

*Contact factory for devices required in BHMA 626

Rim Features

ED5000 Series

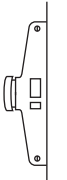

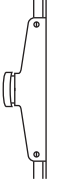









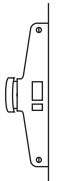

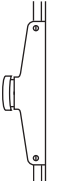









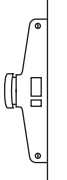











ED5200 and ED5200A Rim Exit Devices



Functions

ED5000 Series

Lever and Knob Trim

Rim/ SecureBolt® ED5200(A) ED5200S(A)		Surface Vertical Rod ED5400(A) ED5470(B)		Concealed Vertical Rod ED5800(A) ED5860(B)		Type	ANSI No.	Function Description
Inside	Outside	Inside	Outside	Inside	Outside			
						Exit Only	01	Exit only; no trim.
						Dummy	02	Entrance by trim when actuating bar is dogged down.
						Nightlatch	03	Entrance by trim when latchbolt is retracted by key.
						Classroom*	08	Entrance by knob or lever. Key locks or unlocks knob or lever.
						Passage	14	Entrance by trim when latchbolt is retracted by knob or lever. Knob or lever always active, no cylinder.
						Storeroom (Grip Active)	09	Entrance by knob or lever only when released by key. Key removable only when locked.

*Classroom function trims can be converted to Storeroom function by a simple field adjustment.

Utility Trims and Functions

ED5000 Series

Rim, SecureBolt®, Vertical Rod Features:

- Free Wheeling vandal-resistant design
- Beveled edges
- Through-bolted to exit device
- Flush cylinder with 6-pin cylinder applications
- 5-year limited warranty



Lever: Cast
Escutcheon: Forged
Cylinder: Rim

Lever Designs (Choose from list below)	Functions					How to Order Example: Trim x Function # 102910			
	Passage ANSI No. 14 Function #910	Dummy ANSI No. 02 Function #950	Classroom ANSI No. 08 Function #955	Nightlatch ANSI No. 03 Function #957	Storeroom ANSI No. 09 Function #959				
Muséo®									
Georgia									
	101 ⁴	102	103	104 ⁴	124 ²	125 ²			
Salvador									
	106	107	108	109	110	123 ²	128 ²		
Marc									
	111 ⁴	112 ⁴	113 ⁴	114 ⁴	115 ⁴	116 ⁴	130 ^{2,4}	131 ^{2,4}	132 ^{2,4}
Pablo									
	117 ⁴	126 ^{2,4}							
Jackson									
	105 ⁴	119 ⁴	121 ⁴	122 ⁴	127 ^{2,4}				
Piet*									
	21G	21L	21M	21S	23M	25M	27M		
Joseph³									
	133	134 ²	135	136 ²	137	138 ²			
Georges									
	139	140	141	142	143				

*See pages 60 for how to order the Muséo® Piet Lever Collection.

1. Classroom function trims can be converted to Storeroom function by a simple field adjustment.

2. Complies with codes requiring lever to return to within 1/2" (13mm) of door face.

3. 135-138 contain white or black polycarbonate insert

4. Not available in 32D or 32 finish

SUBSTITUTION REQUEST

(During the Bidding/Negotiating Stage)

Project: John Savage Housing Complex Substitution Request Number: _____
Wallingford Housing Authority
 To: Silver/Petrucci + Associates From: Door Security Solutions of New England
3190 Whitney Ave, Hamden, CT Date: June 4th, 2020
 Re: _____ A/E Project Number: 2020-013
 Contract For: Wallingford Housing Authority

Specification Title: Door Hardware Description: Door Closers
 Section: 087100 Page: 6+7 Article/Paragraph: 2.9 Surface Closers

Proposed Substitution: Norton Door Controls
 Manufacturer: Norton Address: 3000 A. Jackson Hwy, Monroe NC Phone: 800-438-1951
 Trade Name: Architectural Hardware Model No.: 7500

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: Bill Peterman

Signed by:

Firm: Kelahr Associates – DSS of New England

Telephone: 8602249234

A/E's REVIEW AND ACTION

- Substitution approved - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
- Substitution approved as noted - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
- Substitution rejected - Use specified materials.
- Substitution Request received too late - Use specified materials.

Signed by: **R. Bouchard**

Date: **06.04.2020**

Supporting Data Attached: Drawings Product Data Samples Tests Reports _____

INTRODUCTION

The 7500 Series is a robust, multi-sized surface closer designed to deliver superior performance and long-term reliability. Ideal for interior or exterior doors in facilities that demand reliability, such as government, healthcare and educational institutions.



FEATURES

- » Tri-Style® packaging; tri-packed for regular, top jamb or parallel arm mounting
- » Non-handed
- » Rack-and-pinion design
- » Cast aluminum body
- » Adjustable spring sizes 1-6
- » 2-1/8" (54mm) projection
- » 1-1/2" (38mm) diameter piston
- » 5/8" (16mm) diameter pinion journals
- » Staked valves
- » Retrofit plates
- » NorGlide® fluid
- » Molded plastic cover
- » All standard arm applications allow doors to swing 180°, conditions permitting
- » Self-drilling screws
- » Full-size template

- » Application specific mounting: Regular (S), Top Jamb (JS) or Parallel (P) mount
- » Heavy-duty arms: Regular Rigid, Parallel Rigid, CloserPlus®, CloserPlus Spring™ and Unitrol®
- » Slide Tracks: push or pull side mounting
- » Exceeds 25 million cycles

OPTIONAL FEATURES

- » Standard, separate and independent, latch, sweep and backcheck intensity valves
- » Backcheck positioning
- » Enhanced backcheck. Specify EBC suffix
- » Delayed action with pressure relief valve
- » Corrosion resistant model (non-hold open only): specify 7500SS
- » Metal cover: specify M suffix
- » Lead lined metal cover: specify MLL suffix

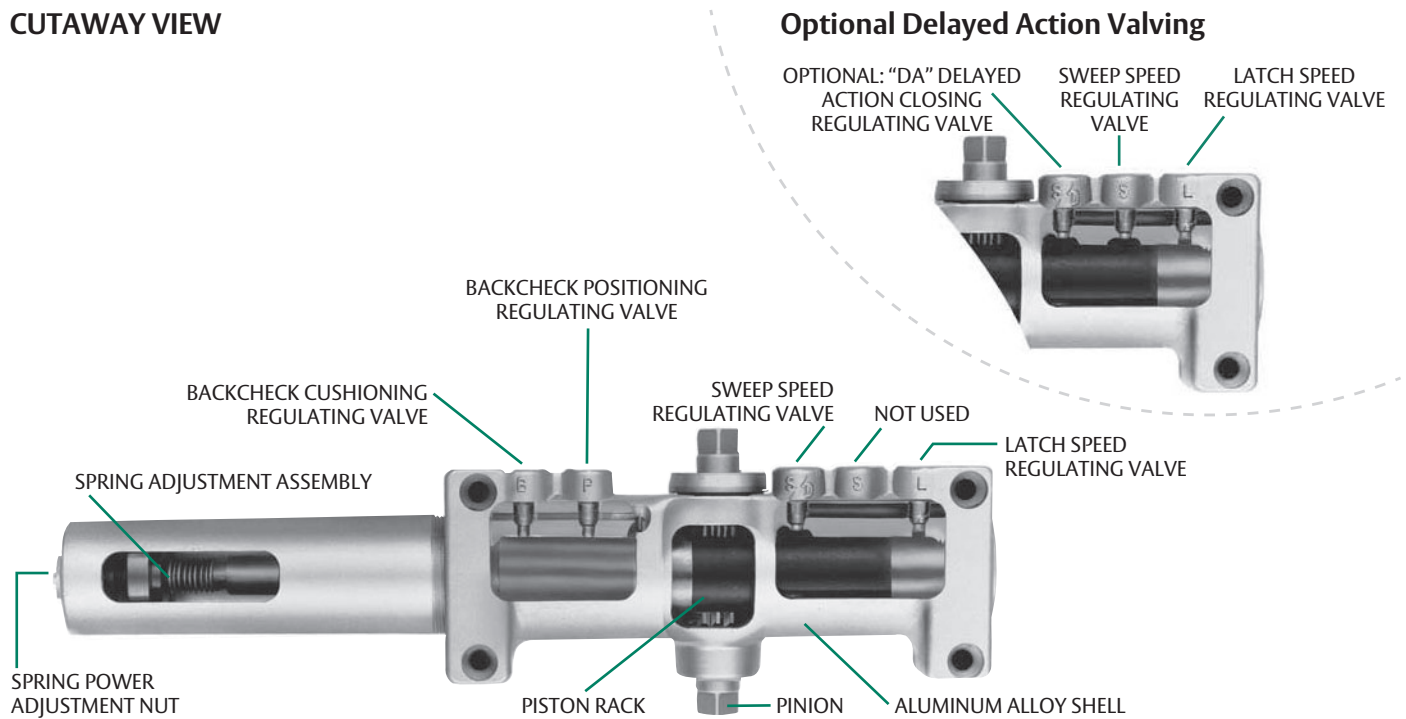
TABLE OF CONTENTS

Introduction, Features.....	2
Overview, Certifications.....	3
Explanation of Features.....	4-5
Specifications.....	6
Applications.....	7-10
Technical Details.....	11-25
Brackets, Mounting Plates.....	26-34
Parts.....	35
Assemblies.....	36-49
Fasteners.....	50
Finishes.....	51
How to Order.....	52




7500 SERIES INSTITUTIONAL DOOR CLOSER

OVERVIEW

CUTAWAY VIEW



CERTIFICATIONS

- » ANSI/BHMA A156.4, Grade 1 certified 
- » UL / cUL listed for use on fire rated doors 
- » UL10C listed for positive pressure fire test
- » 7500 door closers are designed to comply with requirements for the Americans with Disabilities Act (A.D.A) and ANSI standard A117.1 
- » This product is manufactured in an ISO 9001, ISO 14001 facility

CAUTION: Door Closers for Low Opening Force Applications:

Door closers installed in openings required to meet the requirements of the Americans With Disabilities Act or ANSI/BHMA Standard A117.1, when adjusted to meet those requirements, may not provide adequate closing power to dependably close and latch the door based on opening or site conditions.



An Environmental Product Declaration (EPD) documents the cradle-to-grave life cycle of a product and how it affects the environment. An important aspect of EPD[®] is to provide the basis of a fair comparison of products and services by its environmental performance. EPDs can reflect the continuous environmental improvement of products and services over time and are able to communicate and add up relevant environmental information along a product's supply chain.

Windstorm

Norton 7500 door closers are UL certified for inswing and outswing single and pair (up to 8'0" x 8'0") door assemblies to ICC 500 for Storm Shelters. Additionally, the 7500 meets FEMA 361 guidelines. 7500 is part of a complete ASSA ABLOY tornado and hurricane shelter solutions utilizing Ceco StormPro 361, Curries StormPro 361, Fleming F5 doors and frames and McKinney SP hinges.

EXPLANATION OF FEATURES

Aluminum Alloy Housing

Closer bodies are constructed of a special aluminum alloy, carefully selected to accommodate interactive steel components and operating conditions.

Rack & Pinion Operation

Provides a smooth constant control of the door through its full opening and closing cycle. 180° door swing can be achieved when door, frame, hardware and arm function do not interfere.

Non-handed

With few exceptions all series 7500 door closers are non-handed and can be installed on either right or left hand swing doors. Pinion shaft extends vertically through the closer body in both directions. Some options will require that the hand of the closer be specified.

Sweep Speed Control Valve

Allows adjustment of door speed from the door's full open position down to approximately 10° from the closed position.

Latch Speed Control Valve

Allows adjustment of door speed from approximately 10° down to the door's fully closed position.

Tri-Style® Packing

7500 comes with screws, brackets and soffit plates to allow for regular, top jamb, and parallel arm installations.

Adjustable Backcheck Cushion Valve

Provides control of the door in the opening cycle, beginning at approximately 75° of door opening. It slows/cushions the door opening, when the door is forcibly opened beyond its pre-adjusted limits.

Adjustable Backcheck Position Valve

Allows the door opening position, where backcheck cushioning begins, to be adjusted to a greater door angle, up to a maximum of 20° farther (approximately 95°).

Standard Molded Cover

Molded of high-impact U.L. listed material and covers the entire closer body assembly. This cover is non-handed for all applications.

Warranty

These closers carry a limited 25-year warranty against defect, and life of the building on the aluminum housing.

Closer Fluid

NorGlide® closer fluid is a specially formulated multi-viscosity hydraulic fluid that contains lubricity and anti-oxidation agents that provide optimum performance and efficiency. This fluid complements the interaction of the door closer's aluminum housing with its steel and brass components, while maintaining stable viscosity to allow the door closer to perform in temperatures ranging from extremely high to as low as -40° F.

Door Closer Power Options

Series 7500 Multi-Sized Door Closer

Adjustable through the entire power range of door closer sizes 1 through 6, as outlined in ANSI/BHMA standard A156.4.

The series 7500 also conforms to the minimum opening force requirements of the Americans with Disabilities Act (A.D.A.) and ANSI/BHMA standard A117.1 for interior doors.

Corrosion-Resistant Door Closer

The series 7500SS door closers with molded plastic cover are available for use where corrosive conditions exist. This series is provided with brass adjustment valves, a 440 grade stainless steel pinion shaft, an all-aluminum body and bronze closer arm bushings; all other components are of 302/303 grade stainless steel. Fasteners are 8-18 stainless steel. This product is available for standard regular arm, top jamb and parallel arm, non-hold open, applications only.

Optional Metal Cover

This steel cover is non-handed for regular and parallel arm applications, but is handed for top jamb applications. Cover is available in sprayed or architectural plated finishes.



Security Cover

Supplied standard with all series 7570 door closers. This deep drawn steel cover is handed for all applications. The cover is fastened to the closer body at two points on top and to the door closer body stand-offs at two points on the bottom.

Optional ABS Cover

Consult factory for details.

EXPLANATION OF FEATURES

Enhanced Backcheck

This feature provides adjustable backcheck intensity beginning at approximately 15° of the door opening cycle. It is intended for use in situations where the standard backcheck beginning at approximately 75° of door opening allows too much unrestricted door travel to obtain control of the door without the fear of peripheral damage to the door closer, door, frame, hinges or pivots; or adjacent walls or structures. This feature is most frequently used in schools and detention facilities. Specify suffix EBC.

Adjustable Delayed Action Closing

An optional hydraulic feature that adds a third speed range to the closing cycle. This feature becomes effective when the door is opened and released at any point beyond 70°. The amount of time delay depends upon the combination of the angle of door release and valve adjustment. The valve can be adjusted with a 1/8" (3mm) hex key from no delay time up to maximum delay times of:

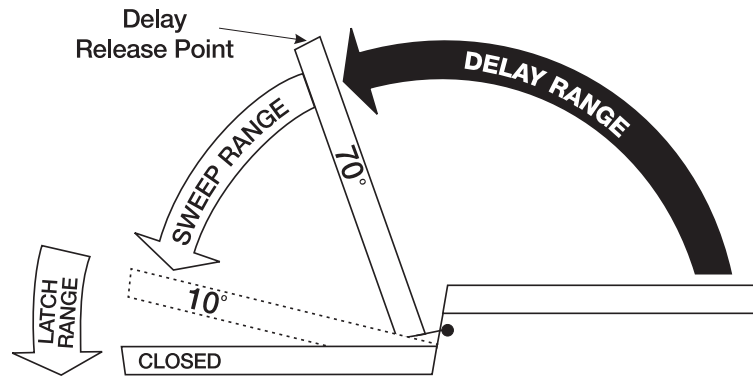
Door Opened and Released at	Approximate Time of Delay Cycle
180°	4-5 minutes
120°	2-3 minutes
90°	25-30 seconds

Pressure Relief Safety Valve

The delayed action hydraulic system contains a pressure relief valve. Any time the door is forced toward the closed direction while it is in the closing cycle, the valve will open and permit the door to close. This prevents damage to door, frame and closer.

Suggested Applications

Delayed Action closing allows slow-moving traffic to clear the opening before the door closer's normal



closing cycle begins. This feature can be helpful in health care facilities such as hospitals and nursing homes. It provides sufficient time for persons on crutches or in wheelchairs to pass through a door without concern of it closing. At the same time, it can accommodate the facility's staff with movement of food service carts, beds, and other wheeled traffic.

Use of delayed action closers on many doors throughout industrial and commercial buildings can also assist the flow of traffic. Locations where additional time to clear the opening is advantageous are doors between office and factory/warehouse facilities, doors to workshops or laboratories, to kitchen and food processing areas, etc.

OPTIONAL FEATURES – ARMS

Non-Hold Open

Self-closes door every time door is opened. Auxiliary stop (by others) required except when using the CloserPlus®, CloserPlus Spring™ or Unitrol® arms.

Hold Open

Achieved by means of ball and detent/roller. Ball and detent or roller hold open is effective in a range of 85° to 110°.

Hold open arm door closers are not permitted to be used on fire door assemblies.

Door Opening Degrees

Arm Function	Regular Top Jamb Parallel Arm	Parallel Rigid Arm	CloserPlus® Parallel Arm	CloserPlus Spring™ Parallel Arm	Unitrol® Parallel Arm	Unitrol® Top Jamb	Low Profile Regular, Parallel	Slide Track
Non-Hold Open	✓	✓	85° to 110°	85° to 110°	85° to 110°	85° to 110°	✓	85° to 110°/180°
Hold Open	90° to 180°	85° to 180°	85° to 110°	85° to 110°	85° to 180°	85° to 180°	✓	85° to 110°

✓=180° trim and template permitting

APPLICATIONS



Non-hold open arm shown

Regular Arm

This is the only pull-side application where a double lever arm is used. It is the most power efficient application for a door closer. Sufficient frame, door and/or ceiling clearance must be considered.

Since the arm assembly projects directly out from the frame, this application may present an aesthetics issue or be prone to vandalism.



Non-hold open arm shown

Top Jamb

For efficiency reasons this application provides the best alternative to the regular arm application. There must be sufficient frame face and/or ceiling clearance for this application. It requires a top rail on the door of just 2-1/8" (54mm). This application provides the best door control for doors in exterior walls that swing out of a building.

The entire door closer and arm assembly project from the frame, similar to the regular arm application, where matters of appearance and malicious abuse can be of concern. Consideration must be given to depth of frame reveal.



Parallel Arm

This application provides the most appealing design appearance for a surface-mounted door closer having a double lever arm. This also makes it beneficial in vandalism-prone areas. It is on the push side of the door and the arm assembly extends almost parallel to the door. In the closed position, there is very little or no hardware projecting beyond the frame face in most situations.

Due to the geometry of the arm it is approximately 25% less power-efficient than a regular arm application. The entire closer and arm assembly are mounted below the frame stop, requiring a top rail clearance on the door of between 6-5/8" (168mm), when using a low profile arm, to 7-1/4" (184mm), when using the hold open arm.