

# Centor Architectural / E3™

medium-heavy bi-folding door system for panels to 176lb (80kg)

CREATING

[www.centorarchitectural.com/e3.htm](http://www.centorarchitectural.com/e3.htm)



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# Creating Seamless Transitions

E3™ is a medium-heavy bi-folding door hardware system for panels to 176lb – Centor Architectural's latest solution to the challenge increasingly being put to the window and door industry – how to create truly seamless transitions between indoor and outdoor spaces. E3™ is suitable for a range of residential and commercial applications which exceed the capacity of the medium E2 Plus™ system but do not demand the substantial heavy door capacity of E4™.



[www.centorarchitectural.com/e3.htm](http://www.centorarchitectural.com/e3.htm)

## E3™ Specifications

**Max panel weight** 176lbs (80kg) each

**Max panel width** 39" (1000mm)

**Max panel height** 118" (3000mm)

### Door Thickness

- a) 1 3/4" or 2 1/4" (44.45 or 57.15mm) when using E3™ sill system
- b) 1 3/8" to 3" (34.9 to 76.2mm) when using floor channel.

**Maximum number of doors** – 8 each direction (52ft opening)

**Note** When using maximum door width and height 39" x 118" (1000mm to 3000mm) door may exceed maximum door weight of 176 lbs (80 kg). Calculated weight check should be done.



> Centor's E3™ Wall Pivot bowing on tall doors is kept under control by Centor's elegantly functional E3™ wall pivot

# 3

## Imagine The Possibilities

Business or pleasure, E3™ means entertainment without the interruption of conventional sliding or hinged doors, views which become vistas, breezes when you please! Over the past decade Centor Architectural's groundbreaking Exterior Bi-folding Window and Door technology has caused a worldwide revolution in window and door installation.



Indoors and outdoors become one with Centor's E3™

With double the weight-bearing capacity of the E2 Plus™ system the elegant, precisely functioning E3™ ensures that possible applications for the Centor's Bi-fold range are limited only by the imaginations of the world's most progressive architects and designers. Allowing for the use of even sturdier frame materials and the option of double glazing, E3™ sets the standard for functional, stylish ways of bringing the outdoors in.

E3™ can be relied upon to add flair and flexibility to the widest range of applications, from private residences to the most ambitious store front, restaurant or commercial project. The benefits to the end-user in flexibly managing their space to suit lifestyle or business have created an overwhelming demand for these systems – literally changing the face of contemporary design. One moment bi-folding doors are acting as an effective, secure barrier from rain, wind and noise. The next they're effortlessly moved aside to reveal wide open space – with no fixed glass panels, mullions or posts and no obtrusive door sill, just a recessed track in the floor. Engineered to withstand the most severe weather E3™ can be just as suited to indoor use, or where exterior doors are needed between a sun room and the main structure – a major advance in visually and physically connecting spaces.

## CREATING SPACE



## High Performance System

Environment, operational function, durability; Painsstaking attention to detail and unerring commitment to quality mean Centor's systems achieve Centor-grade performance – whatever the category. The result is a degree of control and comfort for the end-user which matches the easy flexibility of modern design.

### **Uncompromised Internal Environment**

E3™ is truly a system for all seasons and all locations. E3™ hardware, teamed with quality door panels, creates a formidable barrier against the elements when closed. The integrity of the required internal environment is never compromised.

#### **Rain and Wind**

A door using Centor's bi-fold system was the first tracked bi-folding door system to be successfully certified against Australian Standard AS2047, which specifies the performance required of external windows and sliding doors, in particular for resistance to rain and wind. Many of Centor's door manufacturing clients in Australia, Canada and the United States have tested doors using the system™ to their relevant local standards, including doors utilizing the E4™ system tested to US sea-coastal hurricane standards. The same technology is built into E3™ meaning driving rain and howling gales can be shut out completely. Higher levels of water resistance can naturally be achieved in outward opening doors, but with close attention impressive water performance ratings are achievable from inward opening doors.

#### **Air Infiltration**

The system achieves its superior rain and wind resistance in part from the way it allows the folding doors to close snugly against weather seals. In the same way doors using the E3™ system effectively resist air infiltration to a level up to 50 times better than a sliding door.

#### **Noise and Temperature**

With double glazing allowed for by E3™'s impressive panel weight capacity unprecedented insulation against noise and temperature variation is possible.

### **Effortless Operation**

While E3™'s outstanding performance as part of a secure, weatherproof barrier is crucial, it's not until the doors are opened that the space-transforming benefits of the system truly come into play. For maximum enjoyment and use of the system every effort has been made to ensure that doors glide open and slide shut with the minimum of effort – and that they continue to do so.

#### **Quality Manufacture, Clever Design**

E3™ carriers, guides and pivots use the highest grade stainless steel bearings custom machined to extremely fine tolerances on state-of-the-art Swiss and Japanese machinery – a minimum of five bearings to each carrier. Machined wheels are individually precision ground to an ultra-fine hone. Clever carrier design prevents scraping on the inside of the overhead track. A polypropylene floor channel lining adds to the smooth, almost silent rolling action which brings a smile to the face of the user!



Teamed with quality aluminium doors Centor's bi-fold systems provide modern edge in any space.

### **Installation and Adjustment**

With a choice of quick-fix surface-mounted fittings or mortise hinged components for more traditional wooden joinery, installation couldn't be easier. Comprehensive instructions are included and drill jigs are available for precise placement of fittings.

With architectural grade performance guaranteed for ten years E3™ will operate flawlessly for an indefinite period. Even so the built-in Surelock™ mechanism means the system is tolerant of an imperfect world. If, for example, a newly built structure settles over time the end-user can easily make vertical and lateral adjustments with one hand, simply using a screwdriver!

### **Collaborative Process**

The E3™ system's thoughtful design doesn't achieve the highest performance in all categories all on its own. It's in its element teamed with the quality products created by Centor's many manufacturing and custom fabricating clients. The Centor technical department can assist in the design process for doors incorporating E3™ to ensure that the highest criteria for completed and installed doors are met.

## Laboratory Proven Durability

As much as Centor Architectural enjoys its reputation for innovation, ensuring products meet and exceed the highest standards for durability is just as much of a passion. This means a significant investment in repeatedly testing systems under the toughest of conditions – then testing them again!



Attention to detail in design,  
testing and manufacture creates  
Centor-grade performance.



# CREATING LONGEVITY

### **Laboratory Testing**

In addition to the extensive weather testing undergone by doors using Centor's bi-fold systems, all individual E3™ components have undergone extensive laboratory testing, ensuring years of trouble-free enjoyment from hardware which ages with grace.

### **Cyclic Testing**

Centor's minimum requirement of cyclic testing for any released product is a grueling 50,000 cycles without a single failure at maximum configuration. E3™ has been tested in excess of 50,000 cycles with many of the parts rated to over 100,000 cycles, ensuring years of trouble free operation.

### **Corrosion Testing**

Stainless steel, brass, anodized aluminum, and engineering grade plastics are used throughout the E3™ system and are carefully selected to maximize performance in any environment. Centor conducts regular, thorough corrosion testing in a salt spray chamber, fixing hardware to various substrates to ensure that E3™ performs admirably in challenging conditions such as an exposed coastal application.

### **Structural Testing**

Structural proof load tests up to 3600 Pa (74 psf) have been achieved by doors using the less substantial E2 Plus™ system.

### **Finite Element Analysis**

Finite Element Analysis (FEA) is a computerized simulation technique where products are exposed to virtual operating environments and accurate predictions made in terms of load and deflection. Centor undertakes FEA in the design process to ensure the best balance of performance, cost and materials in every system.

## E3™ Up Close

From even a casual glance at the E3™ system Centor's commitment to quality is obvious, but it's only upon closer examination that the attention to detail really becomes apparent. Stacked with clever standard features, with abundant flexible options to choose from, E3™ is a system that looks even better up close.

### Materials and Finishes

E3™ carriers, guides, pivots and hinges are available in solid brass or architectural grade stainless steel. Brass is available in a bright polished finish or a US10B Oil Rubbed Bronze finish for a choice of harmonizing or contrasting appearance against the door materials. For the precise, modern impact of industrial metal the brushed stainless steel finish is another alternative.

Support track, guide channels and sill are produced in extruded aluminum and can be supplied anodized in clear or bronze.

### Panel Size and Materials

Centor's innovative hinge system (patent pending) enables all door panels to be made the same size regardless of the door configuration (eg 3L2R, 1L4R). The easily installed hardware can teamed with ordinary 'book end' door panels in wood, aluminum, PVC or fiberglass.

### Concealed Floor Channel

Floor guides and floor pivots have been offset so that the guide channel is located directly under the doors when they are in the closed position. This thoughtful feature is not only beneficial from an aesthetic perspective but reduces opportunity for dust and debris to enter the channel.

### E3™ Specifications

Maximum panel weight 176lbs (80kg) each

Maximum panel width 39" (1000mm)

Maximum panel height 118" (3000mm)

#### Door Thickness

- a) 1 3/4" or 2 1/4" (44.45 or 57.15mm) when using E3™ sill system
- b) 1 3/8" to 3" (34.9 to 76.2mm) when using floor channel.

Maximum number of doors – 8 each direction (52ft opening)

**Notes** > Aluminum door system specifications may vary from the above. Consult your aluminum door supplier for details. Minimum panel thickness of 1 3/8" (35mm) allows for weather seal seating on panels correctly. Panels which exceed 2 1/4" (57mm) in thickness or which are below 24" (600mm) in width require special consideration in construction.

There are a number of materials such as soft timbers which are not suited to production of large, weighty doors. Panel construction materials should be of sufficient strength that screws cannot pull out. Concerns about material choice should be referred to a joiner experienced with the Centor's bi-fold systems.

### Wall Pivot

A floating wall pivot is used to control door stile deflection and bowing on tall doors caused by wind loads or climatic conditions. When using tall doors (over 7'4" high), use of four hinges at each junction is recommended, instead of the standard three.

### Drop Bolts

The E3™ system is matched with the clean-lined Symphony™ and Overture™ ranges of dropbolts to anchor the doors firmly in the closed position. They resist wind and together with the weather seals eliminate rattling in strong winds.



> Centor's E3™ Intermediate Carrier  
Up close the attention to detail and commitment to quality are obvious.

## E3™ Assurance

Modern design is all about allowing the end-user to feel relaxed and comfortable in their surroundings. E3™'s superior functioning and performance goes much of the way towards meeting this goal and Centor takes care of the rest with a range of measures to ensure the system can be used with complete confidence.



A barrier becomes a breezeway in moments with E3™.



### Free Specification And Ordering Software

Centor's free specification and ordering software, E3 Doorcalc™ can be downloaded from [www.centorarchitectural.com](http://www.centorarchitectural.com).

E3 Doorcalc™ runs on Microsoft Excel® software and enables the user to specify all of the Centor hardware required for any door opening as well as calculate door panel sizes and number based upon a manufacturer's proprietary manufacturing details.

The program features intuitive drop-down menus to assist the inexperienced Excel® user and allows for identification of each job and automatic generation of an accurate, costed hardware list, including barcodes, ready to forward to Centor!

## CREATING CONFIDENCE

### Unparalleled Security

The E3™ system responds to an increasingly security conscious marketplace with measures designed to ensure unwanted visitors are excluded, as well as the elements.

#### *Concealed Fittings*

When doors utilizing E3™ are closed there are no externally accessible parts that can be removed or damaged. Screw fixings are concealed and hinge caps are retained by hidden fasteners.

#### *Locking Screw Technology*

The E3™ system incorporates locking screw technology which ensures hardware can not be removed from the track when the doors are closed.

### Warranty

In line with a commitment to the highest possible quality Centor offers a 10-year warranty on all E3™ hardware.

For full details refer to the current Centor Architectural Catalogue, or view information on line at [www.centorarchitectural.com](http://www.centorarchitectural.com)

### Hardware Selection

E3™ is a fully integrated system suitable for applications up to 176lb per panel in wood, aluminum, PVC or fiberglass. Architects and specifiers can feel confident simply specifying "Centor E3™" and leaving detailed component selection to the builder/joiner/fabricator. For more detailed selection refer to Component Selection on page 18.





## Centor's Bi-fold Options

Based on the same functional geometry but featuring distinctive capacity and features, the systems making up Centor's bi-fold range (E Window™, E2 Plus™, E3™ and E4™) offer an alternative for every potential application. From the smallest folding window to thirteen feet high walls of glass which fold away in seconds, Centor has it covered.



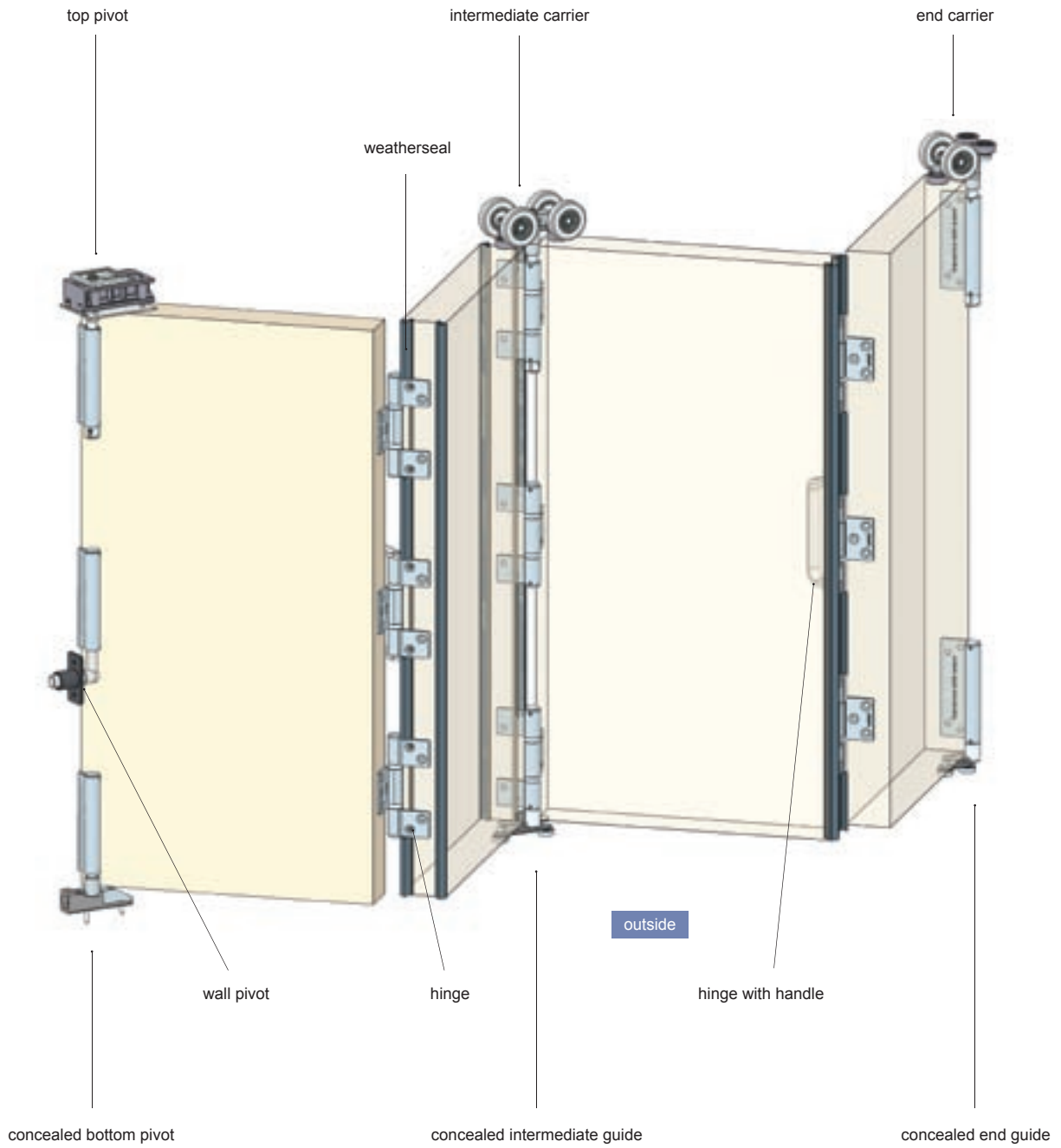
E Window™ and E2 Plus™ are the mainstays of Centor's flexible bi-fold range. Developed first and constantly upgraded since their inception they boast a considerable range of colors and finishes and remain the perfect choice for the private residence or lighter commercial application. E Window™ is also the first folding window system to offer a fully integrated insect screen.

E3™ and E4™ are Centor's responses to the demands of architects and consumers wishing to extend the potential of Centor's bi-fold innovation into heavier-duty residential and commercial applications. The medium-heavy E3™ doubles the panel weight capacity of the medium E2 Plus™ system, making even sturdier panel materials and double glazing possible. The heavy-duty E4™ system takes it even further with a massive panel weight capacity and substantially increased height, width and overall measurement specifications. Applications are limited only by the imagination.



With four systems to choose from Centor bi-fold door hardware makes every idea a reality.

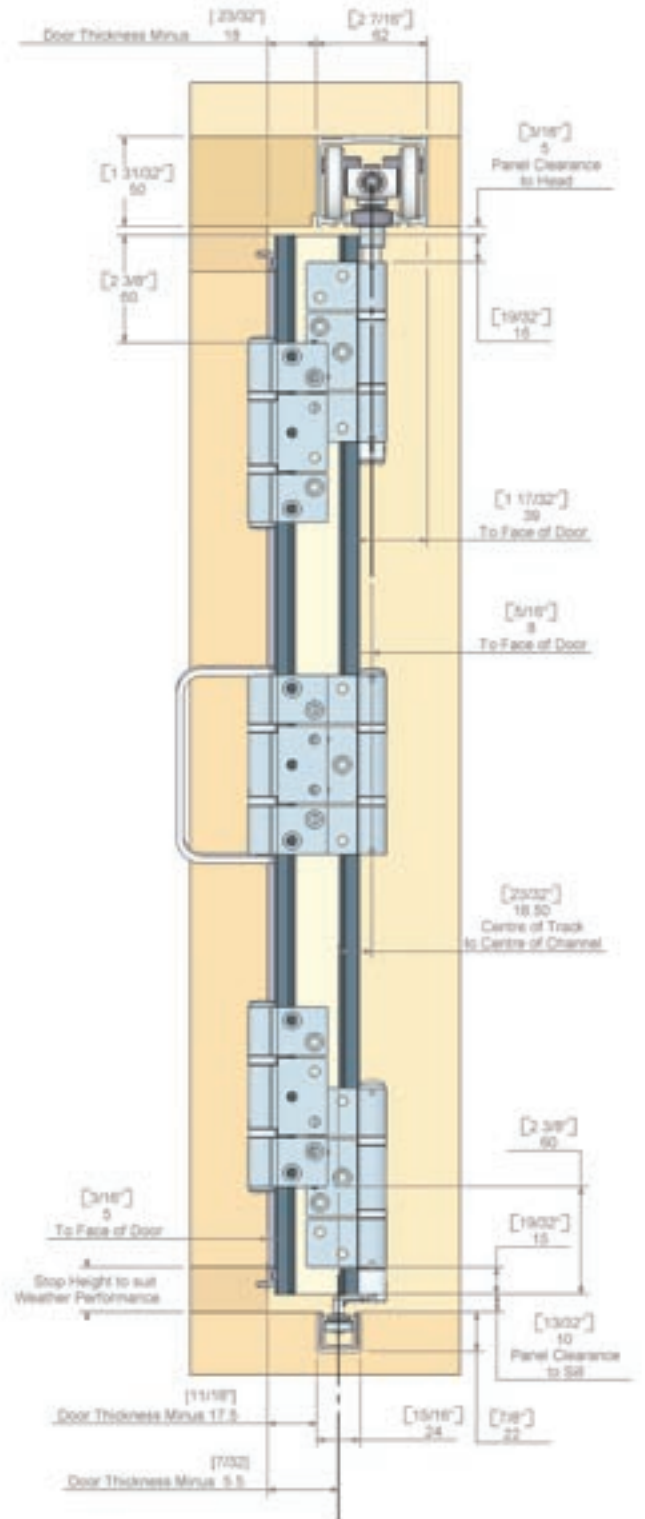
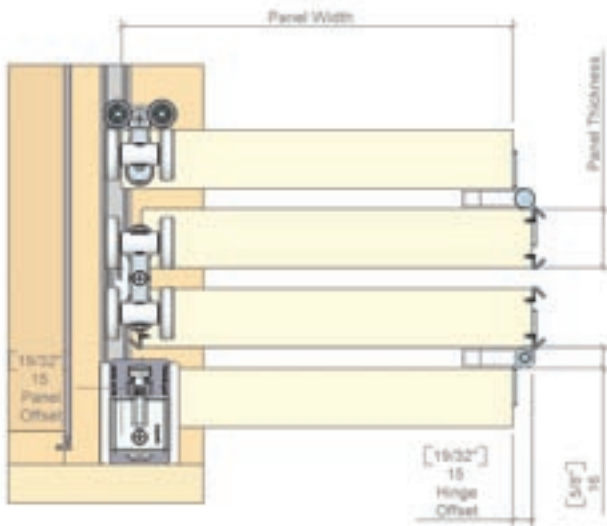
# E3™ Product Details



**US Patents Granted**  
US 6618900 B2  
US 6834703 B2

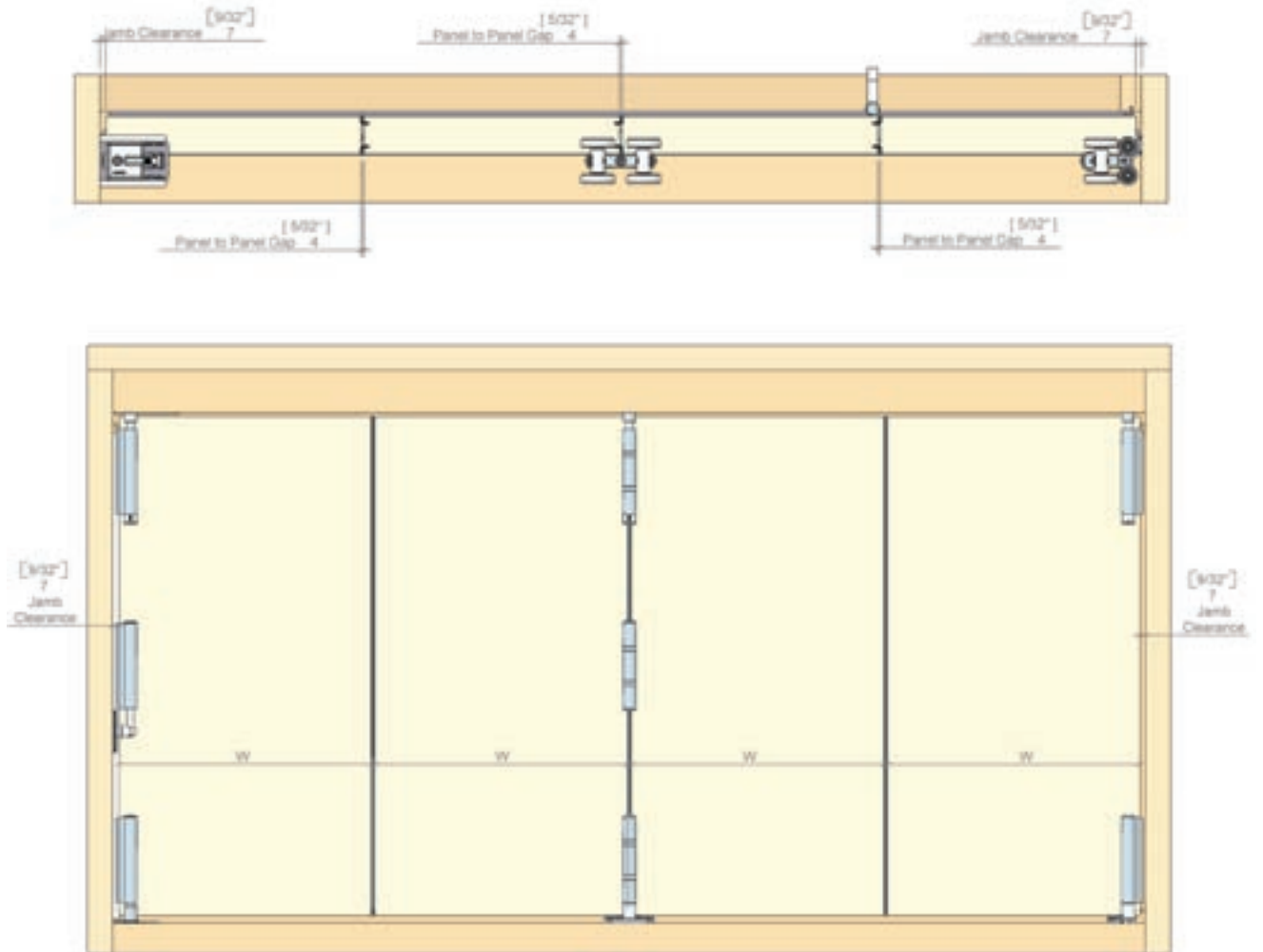
**Other US Patents Pending**  
10/913279

# Architectural Detail

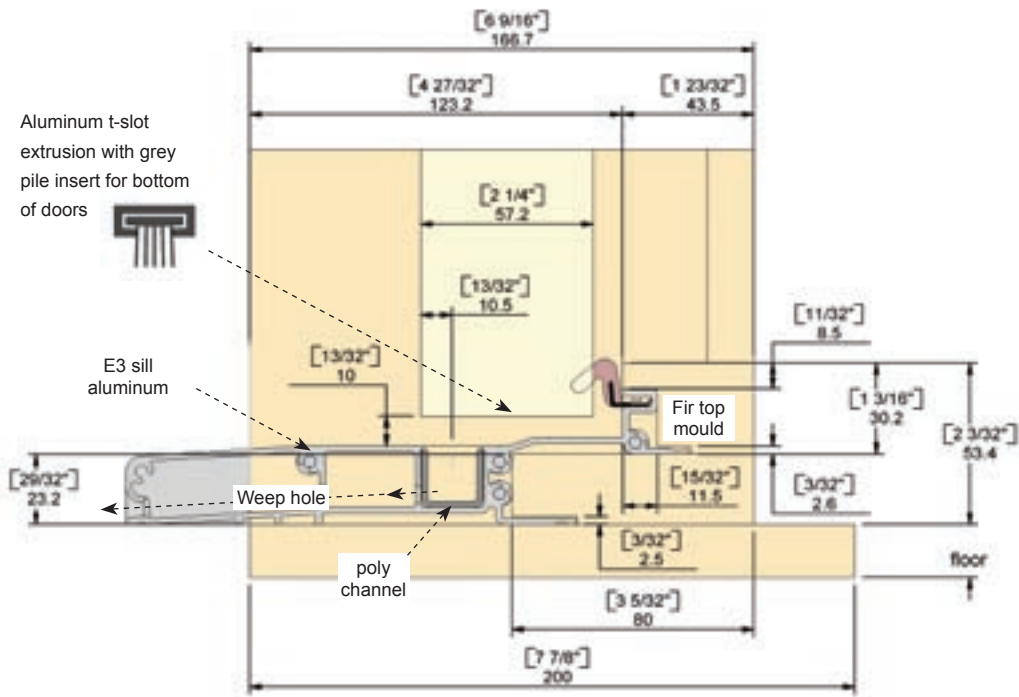




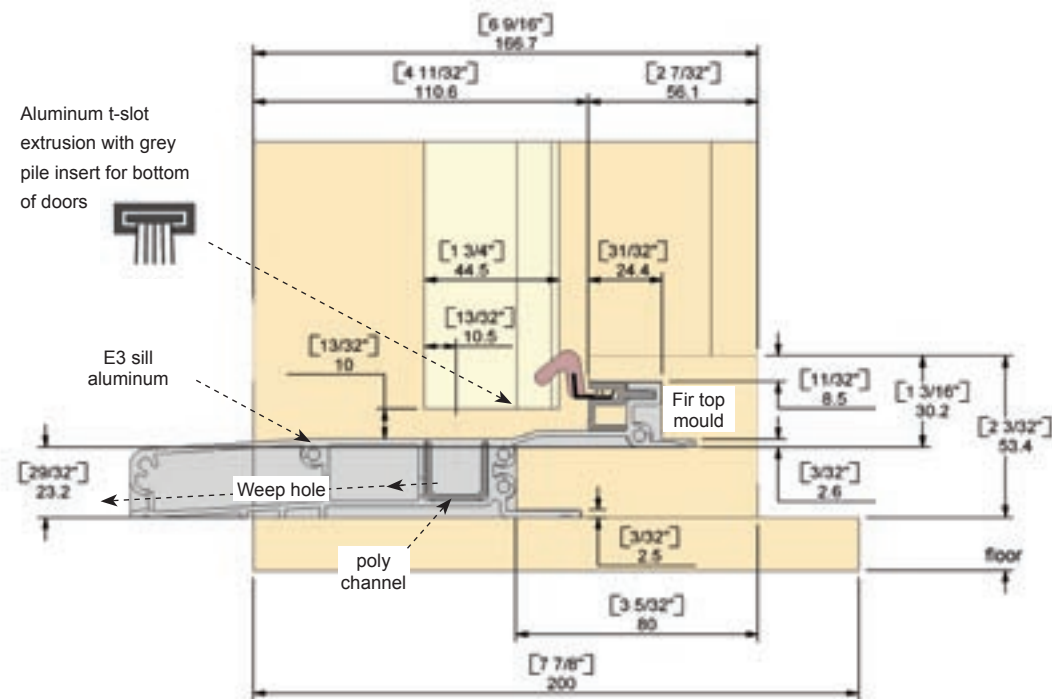
# Architectural Detail



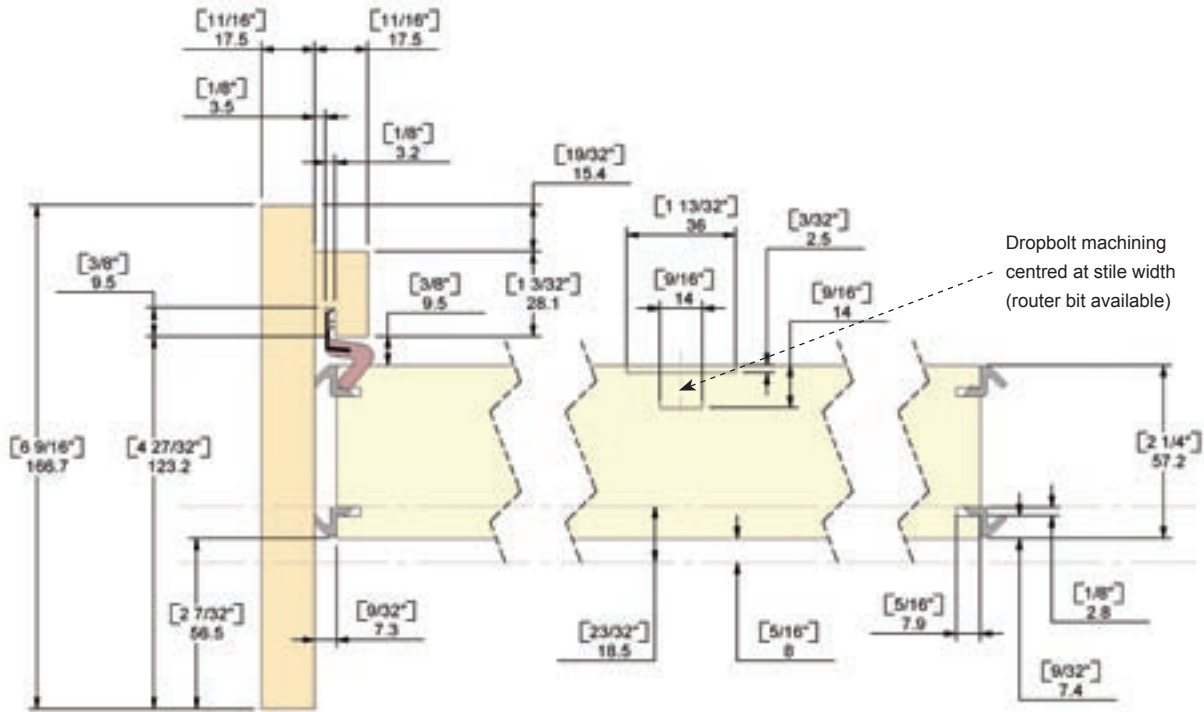
**E3 Sill System for 2-1/4" (57.2mm) door thickness**



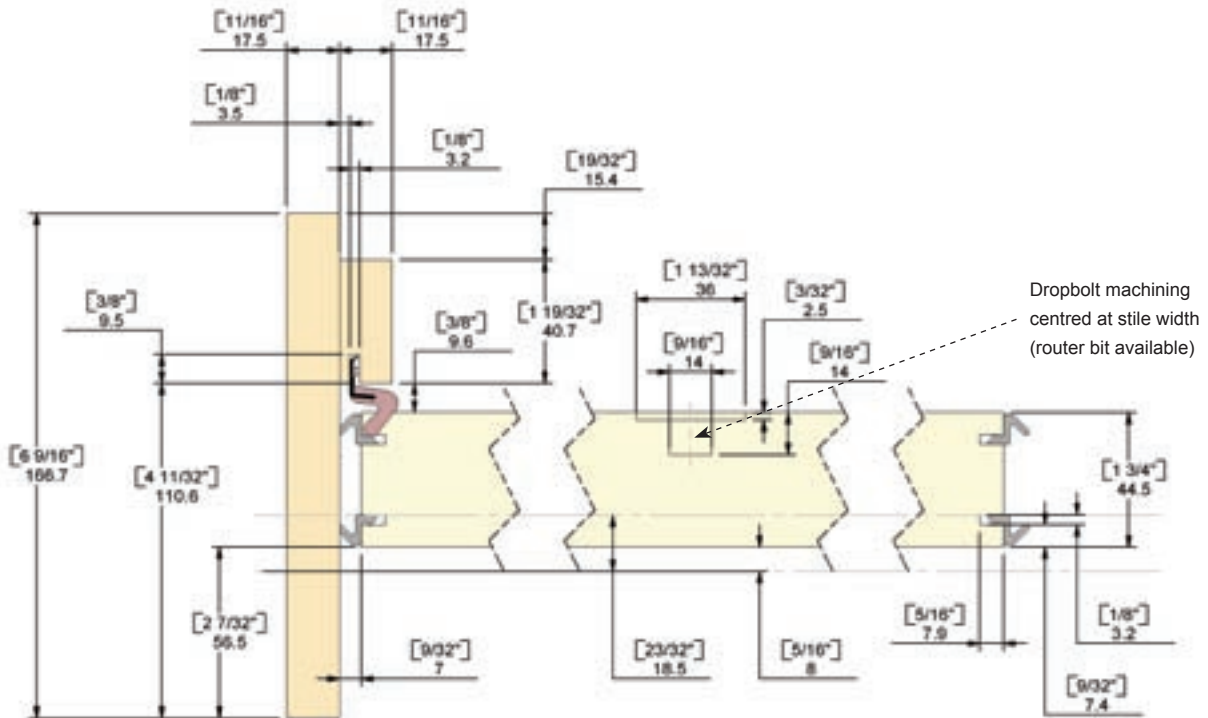
**E3 Sill System for 1-3/4" (44.5mm) door thickness**



E3 Jamb for 2-1/4" (57.2mm) door thickness

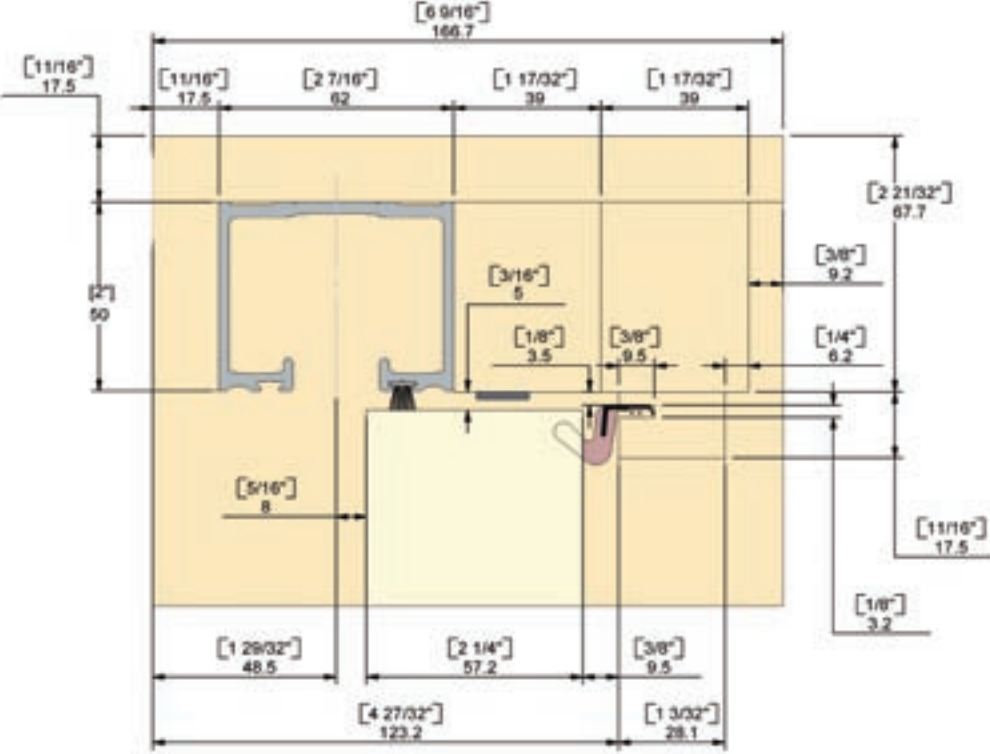


E3 Jamb for 1-3/4" (44.5mm) door thickness

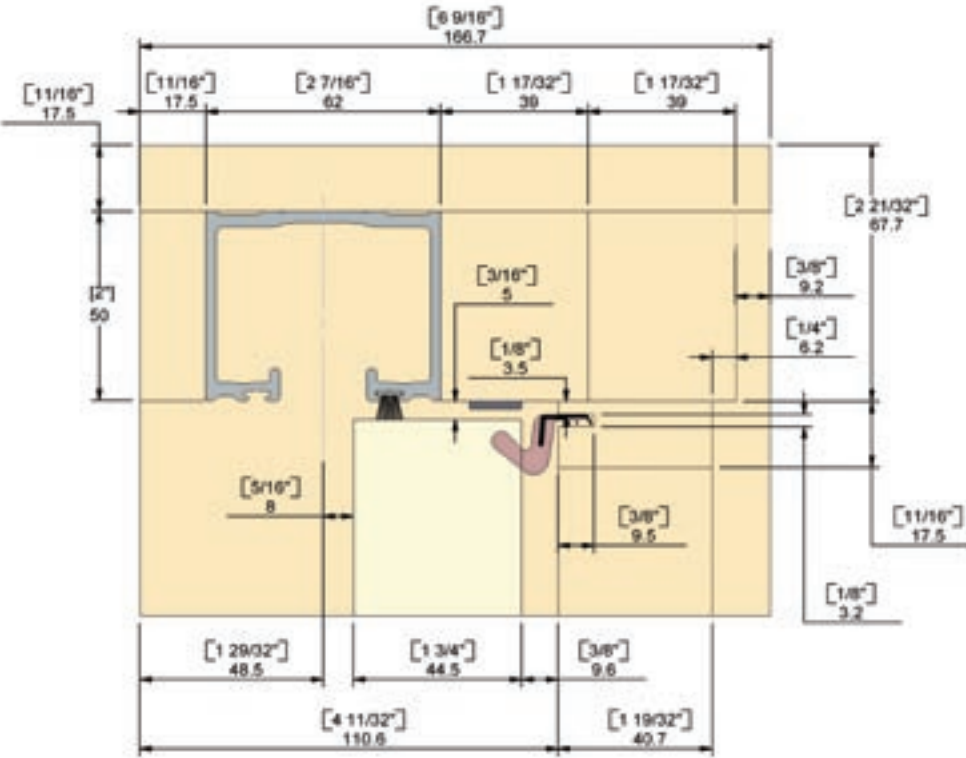




E3 Header for 2-1/4" (57.2mm) door thickness



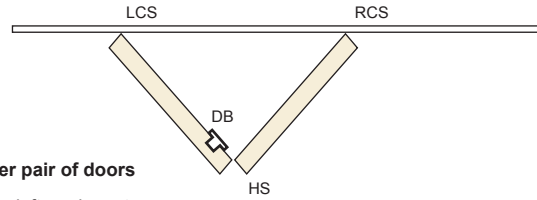
E3 Header for 1-3/4" (44.5mm) door thickness



## Common Panel Layouts

Hardware Legend	
PS	pivot set
WPS	wall pivot set
ICS	intermediate carrier set
LCS	left carrier set
RCS	right carrier set
HHS	half offset hinge set
HS	hinge set (flat)
DB	dropbolt

### Floating Door Pairs

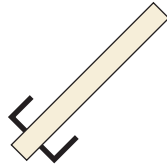


#### Per pair of doors

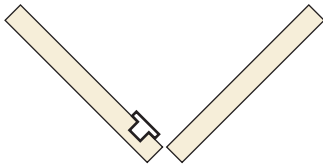
- 1 x left carrier set
- 1 x right carrier set
- 1 x hinge set
- 2 x dropbolt

### Legend

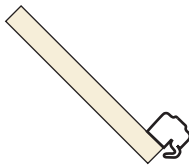
Passage set / Lock by other



Dropbolts top and bottom

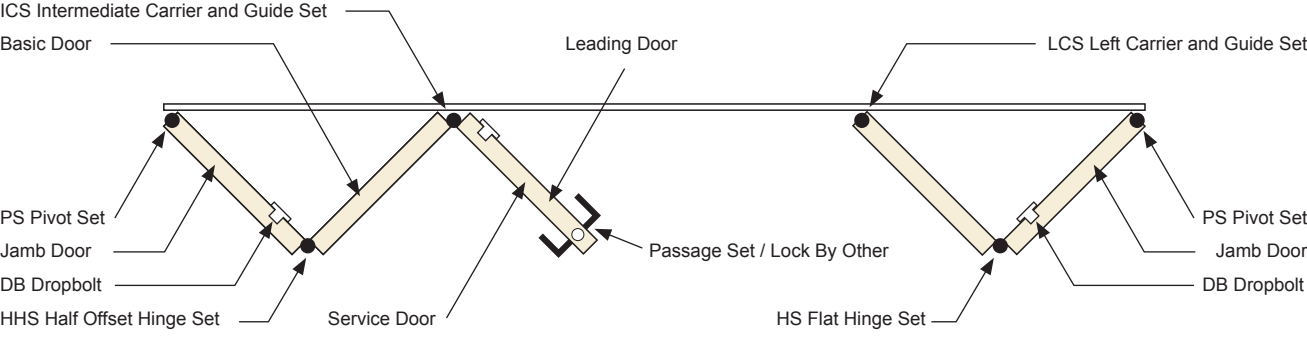


Astragal

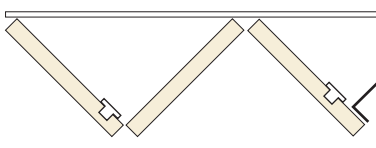


> **Note** Wall Pivot Set recommended for doors over 7'4" (2250mm) in height.

**Hardware Application (3L2R)**



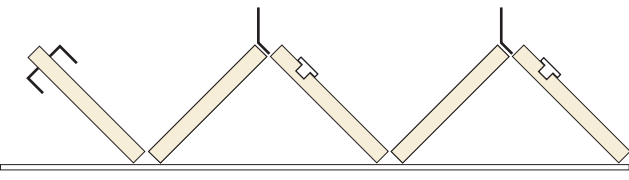
**Outswing Application Exterior Handle Option**



Use one exterior handle on exit door (outswing system) where passage set / lock not required. Use dropbolts top and bottom to lock door from the inside only.

> **Note** Exit door not accessible from exterior in this application.

**Inswing Application Exterior Handle Option**



Use one exterior handle on each pair of doors (inswing system) to pull open and close doors



# Common Panel Layouts (outswing)

CODE	OPENING CONFIGURATION	HARDWARE
2L	inside WPS, PS not accessible from exterior outside	1 x pivot set 1 x right carrier set 1 x hinge set 2 x dropbolt
2L1R	inside WPS, PS WPS, PS outside	2 x pivot set 1 x right carrier set 1 x hinge set 2 x dropbolt
3L	inside WPS, PS ICS outside	1 x pivot set 1 x intermediate carrier set 1 x half offset hinge set 2 x dropbolt
3L1R	inside WPS, PS ICS WPS, PS outside	2 x pivot set 1 x intermediate carrier set 1 x half offset hinge set 4 x dropbolt
4L	inside WPS, PS ICS RCS not accessible from exterior outside	1 x pivot set 1 x intermediate carrier set 1 x right carrier set 2 x half offset hinge set 4 x dropbolt
4L1R	inside WPS, PS ICS RCS WPS, PS outside	2 x pivot set 1 x intermediate carrier set 1 x right carrier set 2 x half offset hinge set 4 x dropbolt
3L2R	inside WPS, PS ICS WPS, PS outside	2 x pivot set 1 x intermediate carrier set 1 x left carrier set 1 x hinge set 1 x half offset hinge set 4 x dropbolt
5L	inside WPS, PS ICS ICS outside	1 x pivot set 2 x intermediate carrier set 1 x hinge set 1 x half offset hinge set 4 x dropbolt
3L3R	inside WPS, PS ICS ICS WPS, PS outside	2 x pivot set 2 x intermediate carrier set 2 x half offset hinge set 6 x dropbolt
7L	inside WPS, PS ICS ICS ICS outside	1 x pivot set 3 x intermediate carrier set 2 x hinge set 1 x half offset hinge set 6 x dropbolt
4L3R	inside WPS, PS ICS RCS ICS WPS, PS outside	2 x pivot set 2 x intermediate carrier set 1 x right carrier set 3 x half offset hinge set 6 x dropbolt
5L2R	inside WPS, PS ICS ICS RCS WPS, PS outside	2 x pivot set 2 x intermediate carrier set 1 x left carrier set 2 x hinge set 1 x half offset hinge set 6 x dropbolt
5L3R	inside WPS, PS ICS ICS ICS WPS, PS outside	2 x pivot set 3 x intermediate carrier set 1 x hinge set 2 x half offset hinge set 8 x dropbolt

CODE	OPENING CONFIGURATION	HARDWARE
2R	inside PS, WPS outside LCS HS not accessible from exterior	1 x pivot set 1 x left carrier set 1 x hinge set 2 x dropbolt
1L2R	inside WPS, PS outside LCS HS	2 x pivot set 1 x left carrier set 1 x hinge set 2 x dropbolt
3R	inside ICS outside WPS, PS HHS	1 x pivot set 1 x intermediate carrier set 1 x half offset hinge set 2 x dropbolt
1L3R	inside WPS, PS ICS WPS, PS outside HHS	2 x pivot set 1 x intermediate carrier set 1 x half offset hinge set 4 x dropbolt
2L2R	inside WPS, PS RCS LCS WPS, PS outside HS HS not accessible from exterior	2 x pivot set 1 x right carrier set 1 x left carrier set 2 x hinge set 4 x dropbolt
1L4R	inside WPS, PS LCS ICS WPS, PS outside HHS HHS	2 x pivot set 1 x intermediate carrier set 1 x left carrier set 2 x half offset hinge set 4 x dropbolt
4R	inside LCS ICS WPS, PS outside HHS HHS	1 x pivot set 1 x intermediate carrier set 1 x left carrier set 2 x half offset hinge set 4 x dropbolt
2L3R	inside WPS, PS RCS ICS WPS, PS outside HS HHS	1 x pivot set 2 x intermediate carrier set 1 x right carrier set 1 x hinge set 1 x half offset hinge set 4 x dropbolt
5R	inside ICS ICS WPS, PS outside HS HHS	1 x pivot set 2 x intermediate carrier set 1 x hinge set 1 x half offset hinge set 4 x dropbolt
3L4R	inside WPS, PS ICS LCS ICS WPS, PS outside HHS HHS HHS	2 x pivot set 2 x intermediate carrier set 1 x left carrier set 3 x half offset hinge set 6 x dropbolt
7R	inside ICS ICS ICS WPS, PS outside HS HS HHS	2 x pivot set 3 x intermediate carrier set 2 x hinge set 1 x half offset hinge set 6 x dropbolt
2L5R	inside WPS, PS RCS ICS ICS WPS, PS outside HS HS HHS	2 x pivot set 2 x intermediate carrier set 1 x right carrier set 2 x hinge set 1 x half offset hinge set 6 x dropbolt
8R	inside LCS ICS ICS ICS WPS, PS outside HHS HS HS HHS not accessible from exterior	1 x pivot set 3 x intermediate carrier set 1 x left carrier set 2 x hinge set 8 x dropbolt

## Component Selection

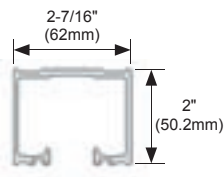
E3™ is specified with 5 separate groups:

- 1 **track**
- 2 **sill with channel**
- 3 **hardware**
- 4 **weathersealing**
- 5 **dropbolts**

Components are required from all 5 groups to build an E3 folding door system.

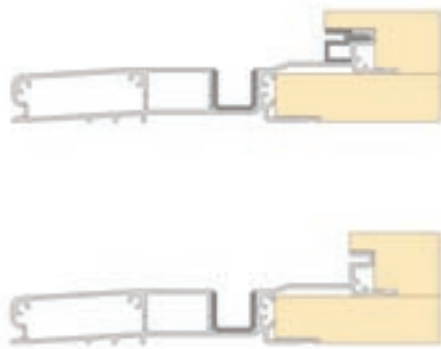

### TRACK SELECTION

Track lengths up to 27ft (8.22m). Cut to length on application.

PART	TRACK	PRODUCT CODE	DESCRIPTION
	Aluminium track, machined	<b>E3TAM4N</b>	13' 1" (4000mm) machined track, natural anodized
		<b>E3TAM4R</b>	13' 1" (4000mm) machined track, bronze anodized
		<b>E3TAM6N</b>	19' 8" (6000mm) machined track, natural anodized
		<b>E3TAM6R</b>	19' 8" (6000mm) machined track, bronze anodized



### SILL SYSTEM

Complete sill lengths up to 27ft (8.22m). Cut to length on application.


PART	TRACK	PRODUCT CODE	DESCRIPTION
		<b>781</b>	Fir top water return sill. Extruded aluminum, natural anodized or bronze anodized. Lengths up to 27ft (8.22m).
		1 3/4" door thickness	
		<b>791</b>	Fir top water return sill. Extruded aluminum, natural anodized or bronze anodized. Lengths up to 27ft (8.22m).
		1 3/4" door thickness	

## CHANNEL SELECTION

Channel Lengths up to 27ft (8.22m). Cut to length on application.

PARTS	CHANNEL	PRODUCT CODE	DESCRIPTION
	Concealed channel 13/16" (21mm), poly channel	<b>E22FCP4</b>	13' 1" (4000mm) floor channel, polypropylene
		<b>E22FCP6</b>	19' 8" (6000mm) floor channel, polypropylene
Replacement polypropylene channel fits inside aluminum channel			
	Concealed channel 15/16" (24mm), retainer	<b>E22FCR4N</b>	13' 1" (4000mm) floor channel retainer, natural anodized
		<b>E22FCR6N</b>	19' 8" (6000mm) floor channel retainer, natural anodized
		<b>E22FCR4R</b>	13' 1" (4000mm) floor channel retainer, bronze anodized
		<b>E22FCR6R</b>	19' 8" (6000mm) floor channel retainer, bronze anodized
Aluminum channel			




## Channel With Poly Insert

PARTS	CHANNEL	PRODUCT CODE	DESCRIPTION
	Concealed channel 15/16" (24mm), retainer and poly channel	<b>E22FCR4NP</b>	13' 1" (4000mm) floor channel retainer, natural anodized with poly channel
		<b>E22FCR4RP</b>	13' 1" (4000mm) floor channel retainer, bronze with poly channel
		<b>E22FCR6NP</b>	19' 8" (6000mm) floor channel retainer, natural anodized with poly channel
		<b>E22FCR6RP</b>	19' 8" (6000mm) floor channel retainer, bronze with poly channel
Aluminum channel with insert			



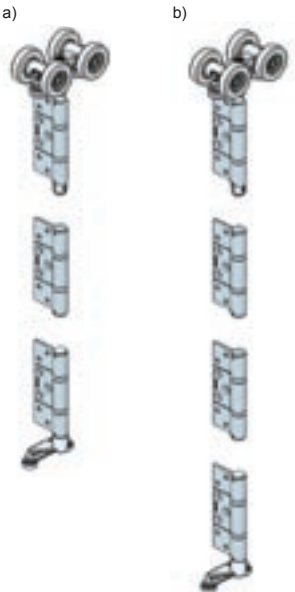


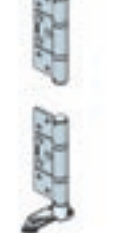
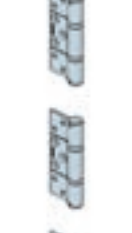


## HARDWARE SELECTION

### Left / Right Carrier Set

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
 <p>a)  </p> <p>b)  </p>	 a)  b)	<b>E3CLCSS</b> <b>E3CLCSB</b> <b>E3CLCSO</b> <b>E3CRCSS</b> <b>E3CRCSB</b> <b>E3CRCSO</b>	concealed <b>left</b> hand carrier set, stainless steel concealed <b>left</b> hand carrier set, brass concealed <b>left</b> hand carrier set, oil rubbed bronze concealed <b>right</b> hand carrier set, stainless steel concealed <b>right</b> hand carrier set, brass concealed <b>right</b> hand carrier set, oil rubbed bronze

- a) **left** hand carrier set with concealed bottom guide  
 b) **right** hand carrier set with concealed bottom guide

### Intermediate Carrier Set (Intermediate Four Hinge Carrier Set are recommended for doors over 7'4" (2250mm))

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
 <p>a)  </p> <p>b)  </p>	 a)  b)	<b>E3CICSS</b> <b>E3CICSB</b> <b>E3CICSO</b> <b>E3CICSS4</b> <b>E3CICSB4</b> <b>E3CICSO4</b>	concealed intermediate set, stainless steel concealed intermediate set, brass concealed intermediate set, oil rubbed bronze concealed four hinge intermediate set, stainless steel concealed four hinge intermediate set, brass concealed four hinge intermediate set, oil rubbed bronze

- a) intermediate carrier set with concealed bottom guide  
 b) intermediate four hinge carrier set with concealed bottom guide

### Hinge Set

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
		<b>E3HSS</b> <b>E3HSB</b> <b>E3HSO</b> <b>E3HNHSS</b> <b>E3HNHSB</b> <b>E3HNHSO</b>	hinge set <b>with handle</b> , stainless steel hinge set <b>with handle</b> , brass hinge set <b>with handle</b> , oil rubbed bronze hinge set <b>with no handle</b> , stainless steel hinge set <b>with no handle</b> , brass hinge set <b>with no handle</b> , oil rubbed bronze

a) hinge set **with handle** for outswing doors  
 b) hinge set **with no handle** for inswing doors

### Four Hinge Set for doors over 7'4" (2250mm)

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
		<b>E3HSS4</b> <b>E3HSB4</b> <b>E3HSTO4</b> <b>E3HNHSS4</b> <b>E3HNHSB4</b> <b>E3HNHSO4</b>	four hinge set <b>with handle</b> , stainless steel four hinge set <b>with handle</b> , brass four hinge set <b>with handle</b> , oil rubbed bronze four hinge set <b>with no handle</b> , stainless steel four hinge set <b>with no handle</b> , brass four hinge set <b>with no handle</b> , oil rubbed bronze

a) four hinge set **with handle** for outswing doors  
 b) four hinge set **with no handle** for inswing doors

### Half Offset Hinge Set

PARTS		PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
a)	b)	a)	E3HHSS E3HHSB E3HHSO E3HHNHSS E3HHNHSSB E3HHNHSSO	half offset hinge set <b>with handle</b> , stainless steel half offset hinge set <b>with handle</b> , brass half offset hinge set <b>with handle</b> , oil rubbed bronze half offset hinge set <b>with no handle</b> , stainless steel half offset hinge set <b>with no handle</b> , brass half offset hinge set <b>with no handle</b> , oil rubbed bronze

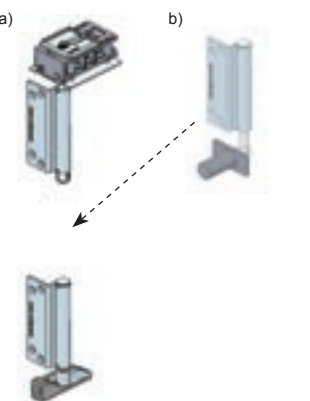
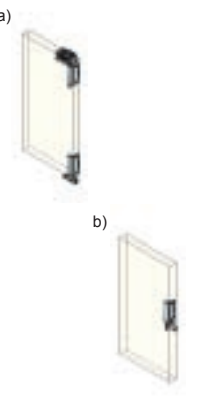
a) half offset hinge set **with handle** for outswing doors  
b) half offset hinge set **with no handle** for inswing doors

### Half Offset Four Hinge Set for doors over 7'4" (2250mm)

PARTS		PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
a)	b)	a)	E3HHSS4 E3HHSSB4 E3HHSO4 E3HHNHSS4 E3HHNHSSB4 E3HHNHSSO4	half offset four hinge set <b>with handle</b> , stainless steel half offset four hinge set <b>with handle</b> , brass half offset four hinge set <b>with handle</b> , oil rubbed bronze half offset four hinge set <b>with no handle</b> , stainless steel half offset four hinge set <b>with no handle</b> , with forth hinge, brass half offset four hinge set <b>with no handle</b> , oil rubbed bronze



a) half offset four hinge set **with handle** for outswing doors over 7'4" (2250mm)  
b) half offset four hinge set **with no handle** for inswing doors over 7'4" (2250mm)

Pivot Set / Wall Pivot

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
		<p>E3CPSS E3CPSB E3CPSO E3WPSS E3WPSSB E3WPSSO</p>	<p>concealed pivot set, stainless steel concealed pivot set, brass concealed pivot set, oil rubbed bronze wall pivot set, stainless steel wall pivot set, brass wall pivot set, oil rubbed bronze</p>

a) pivot set  
b) jamb mounted middle wall pivot recommended for doors over 7'4" (2250mm) to central deflection and bowing.







External Handle

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
		<p>E3EHS E3EHB E3EHO</p>	<p>external handle, stainless steel external handle, brass external handle, oil rubbed bronze</p>

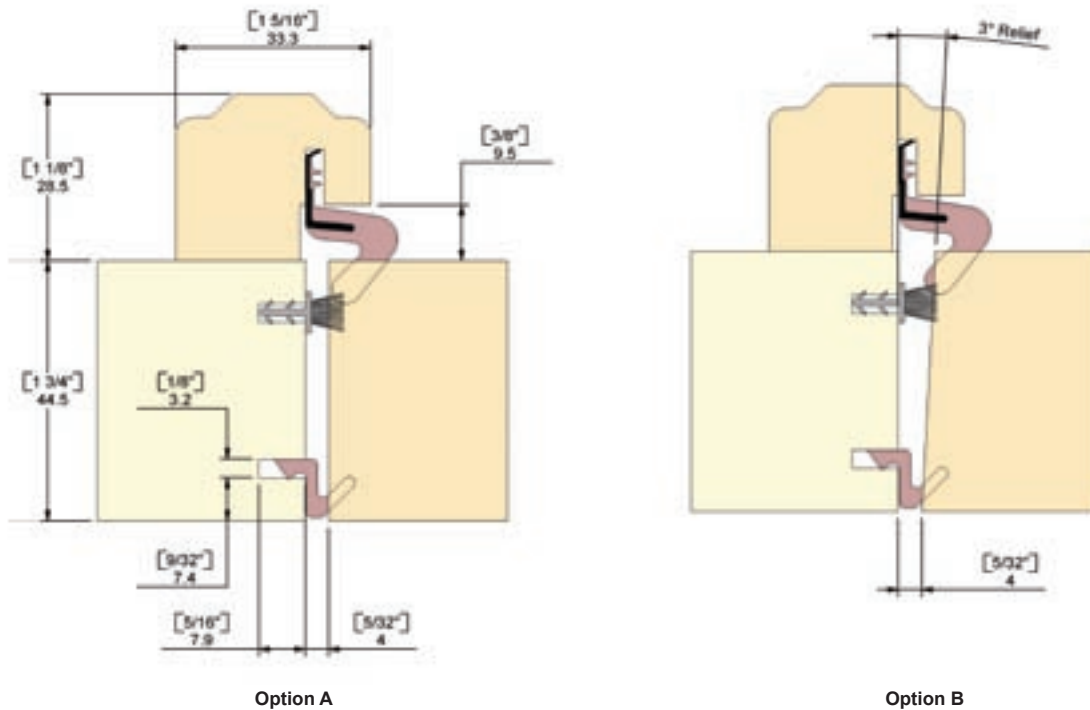
single hinge **with handle** for outswing and inswing application (please refer to Common Panel Layouts page 14 fore more details)





Weatherseals And Astragal Selection

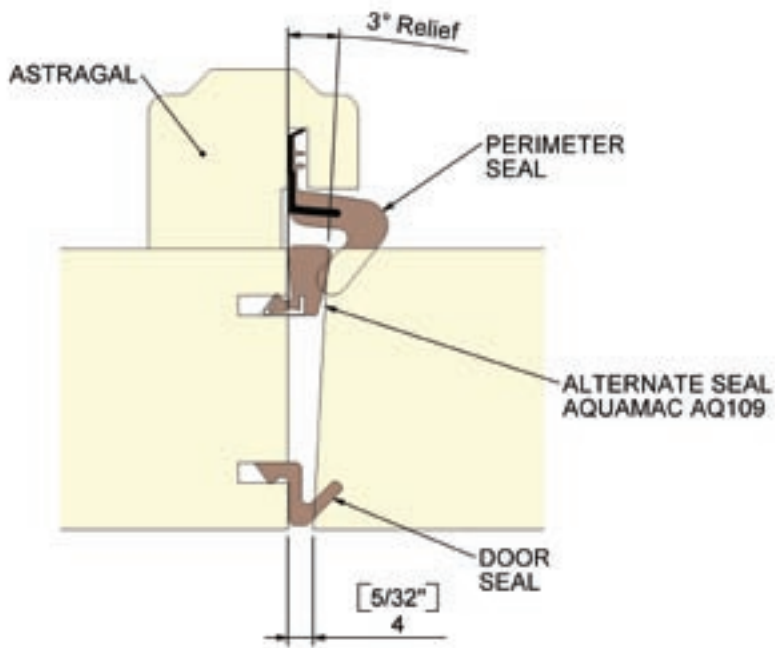
PARTS	PRODUCT CODE	DESCRIPTION
	369	Aluminum t-slot extrusion with grey pile insert for bottom of doors
	426	White or brown weatherseal for between doors
	427	White or brown weatherseal for sill, jamb and header (perimeter)
	428	White or brown adhesive backed weatherseal for between doors. Use on clad doors instead of kerf
	190	Astragal (FIR). May be stained or painted
	P108-35	For door with astragal.

Astragal Detail – Triple Seal For Superior Sealing Performance for ‘meeting’ door panels



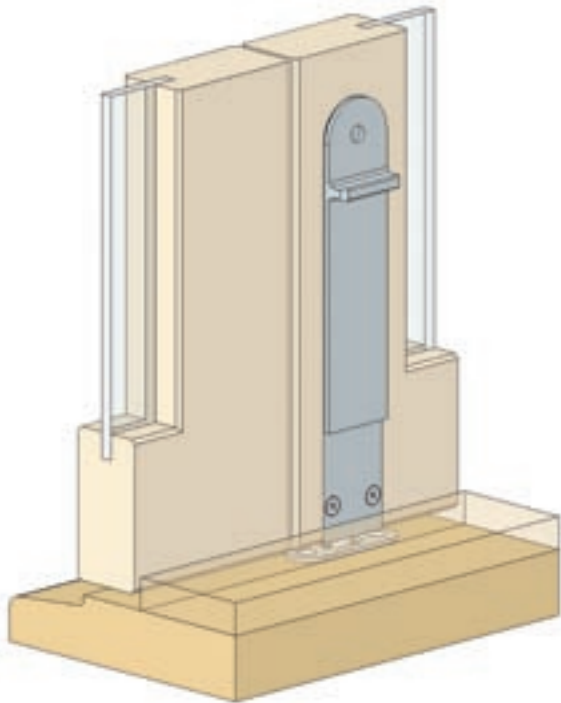
Weatherseal Alternate Selection

PART	PRODUCT CODE	PART DESCRIPTION
	<p>AQ63B                      AQ63L                      AQ63W</p>	<p>Aquamac 63 Schlegel Kerf seal, brown for between doors                      Aquamac 63 Schlegel Kerf seal, black for between doors                      Aquamac 63 Schlegel Kerf seal, white for between doors</p>
	<p>AQ109B                      AQ109L                      AQ109W</p>	<p>Aquamac 109 Schlegel Kerf seal, brown for access panel and astragal                      Aquamac 109 Schlegel Kerf seal, black for access panel and astragal                      Aquamac 109 Schlegel Kerf seal, white for access panel and astragal</p>



## DROPBOLTS / SYMPHONY™

This flush-mounted dropbolt with 1" (25mm) throw is designed for use with sliding and folding doors. Symphony will resist high winds and is rated to resist a 550lb (250kg) load in Western Red Cedar and 990lb (450kg) in Amora. We can test your actual door section and provide a test certificate stating the rating achieved. The bolts are easily installed with a dedicated router bit and are available in three finishes



Patent granted



### Symphony™ Specifications

Maximum wind load 990lb (450kg) force

Minimum door thickness 1 3/4" (44.45mm)

Bolt lengths 8" (200mm), 16" (400mm), 24" (600mm), 39" (1000mm)

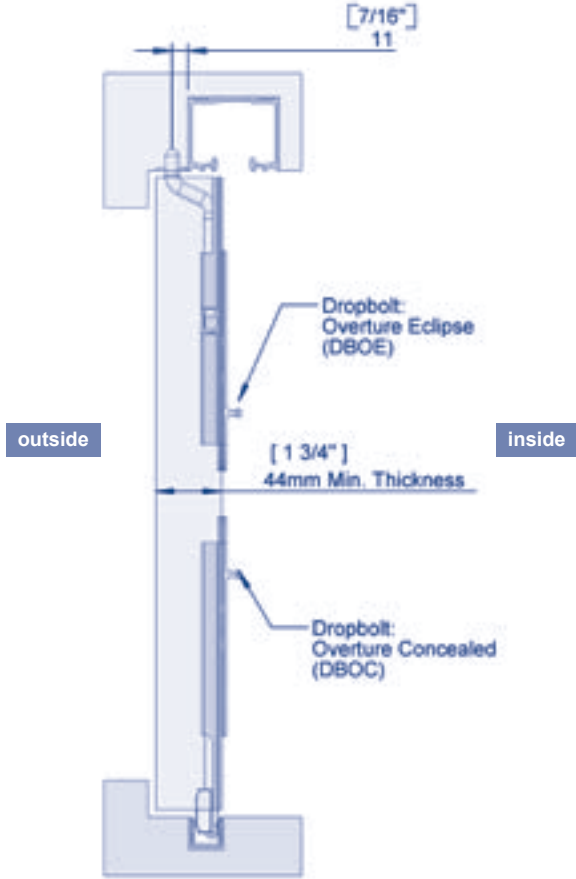
Throw length 1" (25mm)

Finishes Gold anodized to match Polished Brass hardware,  
Oil Rubbed Bronze on Aluminum to match US10B hardware,  
Brushed Metallic to match Stainless Steel Hardware

PART	PRODUCT CODE	DESCRIPTION
	KTDBSY200NRG	8" (200mm), gold anodized
	KTDBSY400NRG	16" (400mm), gold anodized
	KTDBSY600NRG	24" (600mm), gold anodized
	KTDBSY200NRO	8" (200mm), oil rubbed bronze
	KTDBSY400NRO	16" (400mm), oil rubbed bronze
	KTDBSY600NRO	24" (600mm), oil rubbed bronze
	KTDBSY1000NRO	39" (1000mm), oil rubbed bronze
	KTDBSY200NRX	8" (200mm), brushed metallic
	KTDBSY400NRX	16" (400mm), brushed metallic
	KTDBSY600NRX	24" (600mm), brushed metallic
	KTDBSY1000NRX	39" (1000mm), brushed metallic
	KTDBSY1000NRY	39" (1000mm), brushed metallic

**DROPBOLTS / OVERTURE™ (for inswing doors)**

Centor's latest dropbolt, Overture Eclipse is specifically designed to complement Centor's E2 Plus, E3 and E4 bi-folding hardware for inswing opening doors.



Overture™ Specifications
Minimum door thickness 1 3/4" (44.45mm)
Bolt lengths 8" (200mm), 16" (400mm), 24" (600mm), 39" (1000mm)
Throw length 3/4" (20mm)
Finishes Gold anodized to match Polished Brass hardware, Oil Rubbed Bronze on Aluminum to match US10B hardware, Brushed Metallic to match Stainless Steel Hardware

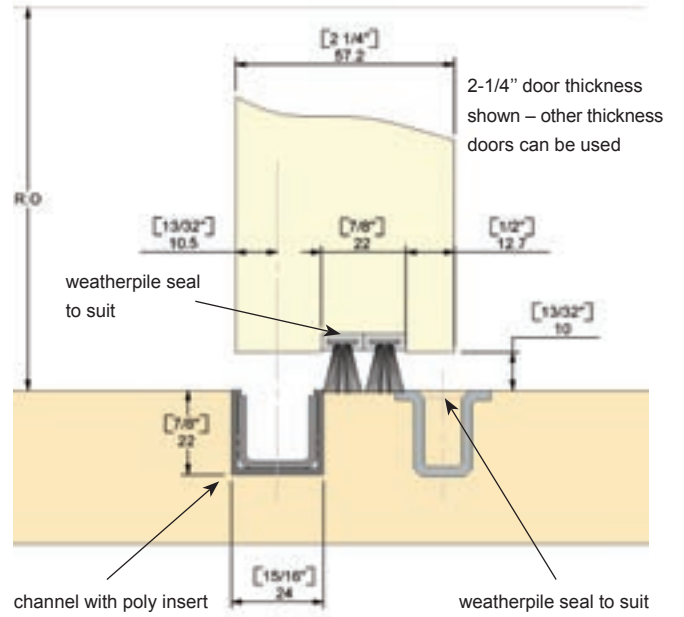
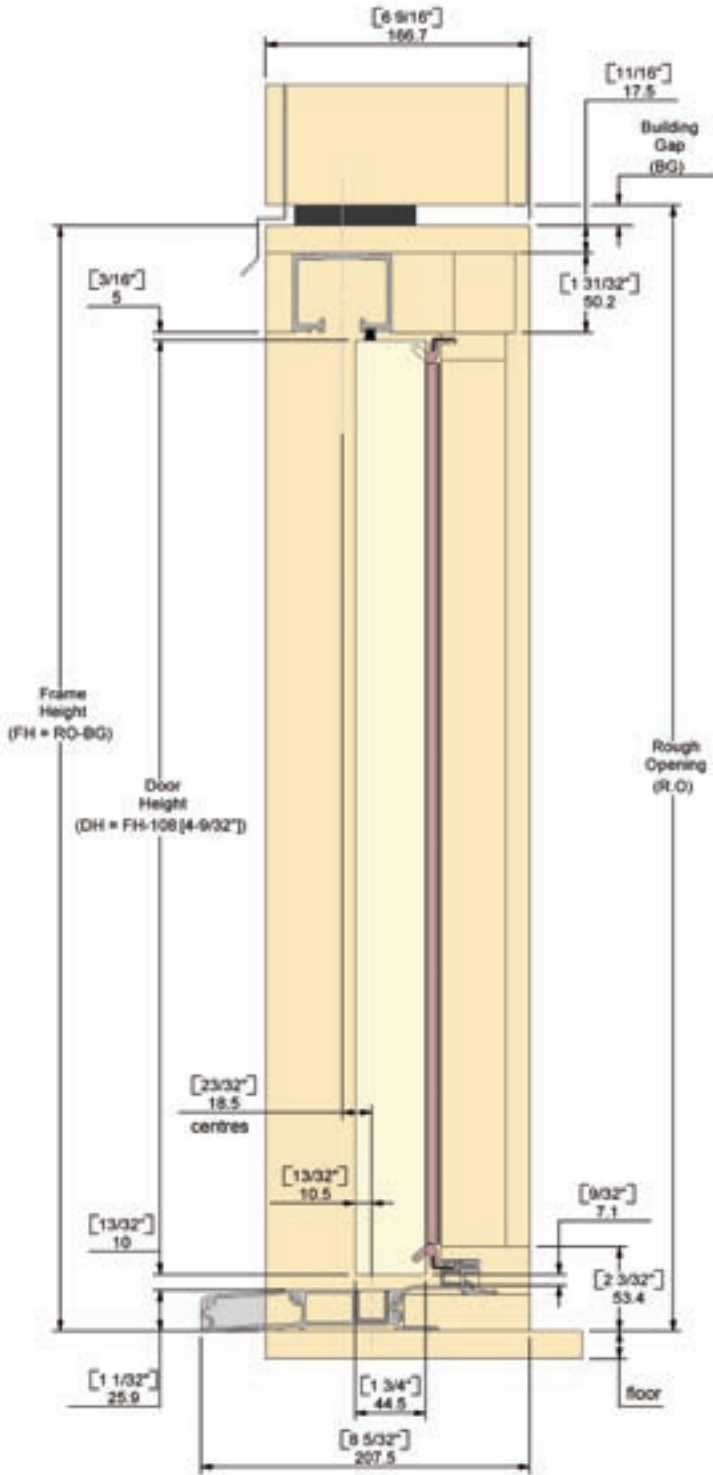
PART	PRODUCT CODE	DESCRIPTION
 <p><b>DBOC</b> Dropbolt Overture Concealed</p>	<b>DBOC200NRG</b>	8" (200mm) concealed dropbolt, gold anodized
	<b>DBOC200NRX</b>	8" (200mm) concealed dropbolt, brushed metallic
 <p><b>DBOE</b> Dropbolt Overture Eclipse</p>	<b>DBOC200NRO</b>	8" (200mm) concealed dropbolt, oil rubbed bronze
	<b>DBOE200NRG</b>	8" (200mm) dropbolt, gold anodized
	<b>DBOE200NRX</b>	8" (200mm) dropbolt, brushed metallic
	<b>DBOE200NRO</b>	8" (200mm) dropbolt, oil rubbed bronze
	<b>DBOE400NRG</b>	16" (400mm) dropbolt, gold anodized
	<b>DBOE400NRX</b>	16" (400mm) dropbolt, brushed metallic
	<b>DBOE400NRO</b>	16" (400mm) dropbolt, oil rubbed bronze
	<b>DBOE600NRG</b>	24" (600mm) dropbolt, gold anodized
	<b>DBOE600NRX</b>	24" (600mm) dropbolt, brushed metallic
	<b>DBOE600NRO</b>	24" (600mm) dropbolt, oil rubbed bronze
	<b>DBOE1000NRG</b>	39" (1000mm) dropbolt, gold anodized
	<b>DBOE1000NRX</b>	39" (1000mm) dropbolt, brushed metallic
	<b>DBOE1000NRO</b>	39" (1000mm) dropbolt, oil rubbed bronze



# Installation Details

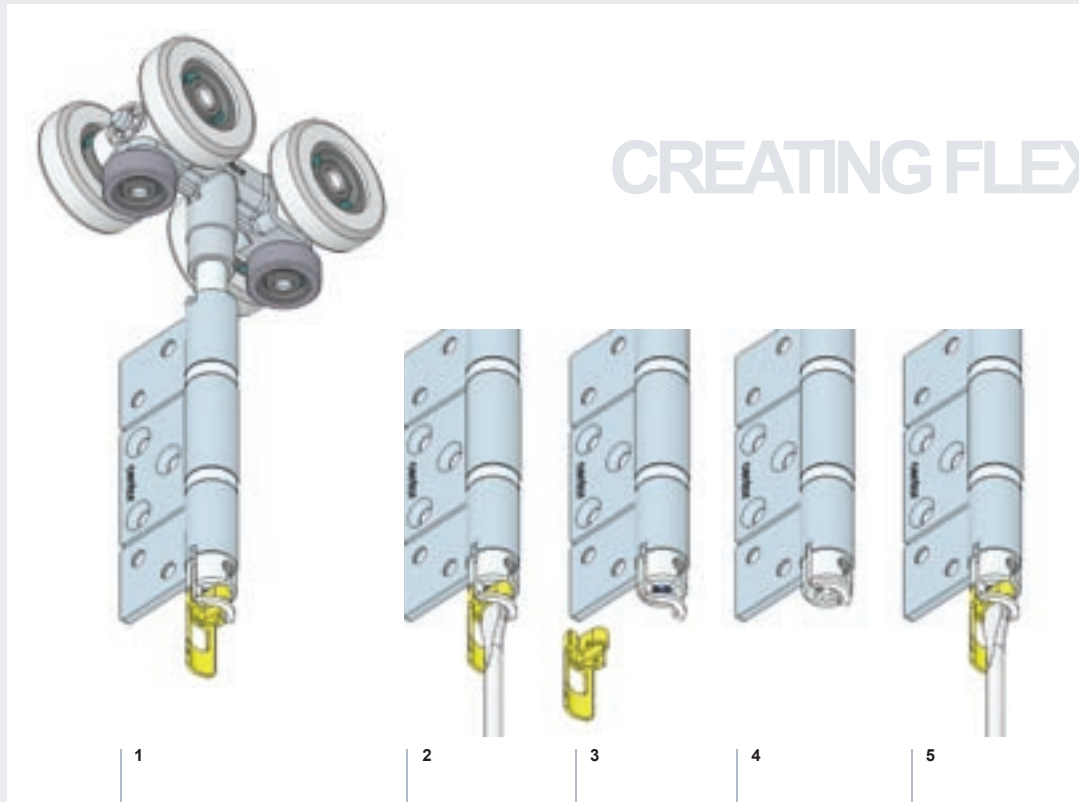
Full opening with self drain sill option

Flush with floor channel sill option



### Surelock™ Adjustment

Surelock™ is Centor's patented carrier pin locking system which ensures that once door heights are set at the top pivots, intermediate and end carriers, they stay set!



Using Surelock™ is simple

- 1 Components come supplied with a plastic shipping clip installed.
- 2 Insert a flat-bladed screwdriver into the slot and rotate the pin.
- 3 When correct adjustment is reached remove the shipping clip.
- 4 Surelock™ will snap into place when the blade and slot are aligned.
- 5 To readjust pull the blade down to disengage it from the slot, replace the shipping clip and rotate the pin.
- 6 **Remove shipping clip after final installation adjustment.**

CREATING

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