

centor ARCHITECTURAL

E3 bifolding door hardware system for panels to 80kg



centor ARCHITECTURAL
creating systems for windows & doors

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Creating Seamless Transitions

Centor E3 is a medium-heavy bifolding door hardware system for door panels to 80 Kg – Centor Architectural’s latest solution to the challenge of creating truly seamless transitions between indoor and outdoor spaces. E3 is suitable for a range of applications from stylish private residences to the most ambitious store front, restaurant or commercial project; anywhere the ability to flexibly manage space to suit lifestyle or business is required.



SUITABLE FOR DOUBLE GLAZING

16 DOOR PANEL CAPACITY

80 KILOGRAM DOOR PANEL CAPACITY

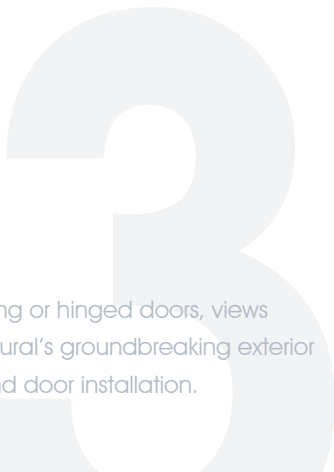
STAINLESS STEEL CONSTRUCTION

Allowing for the extra weight of double-glazing, E3-based bifold doors promise unprecedented insulation against noise and temperature variation when doors are closed. Likewise the ability to utilise even sturdier door construction and materials enhances security and resistance to the elements in the most exposed of applications. The renowned effortless operation of Centor products remains, even as maximum panel weight increases, making E3 the perfect way to utilise bifold technology in even the toughest conditions.



E3 Specifications	
max opening	16m
max panel weight	80kg
max panel height	3000mm
max panel width	1000mm
min panel thickness	35mm
max number of panels	16 (8 each direction)

Note: Specifications are intended as a guide only. Calculated weight check should be performed to ensure doors built to maximum height and width do not exceed maximum weight.



Imagine The Possibilities

Business or pleasure, E3 means entertainment without the interruption of conventional sliding or hinged doors, views which become vistas, a breeze when you please! Over the past decade Centor Architectural's groundbreaking exterior bifolding window and door technology has instigated a worldwide revolution in window and door installation.



One moment bifolding 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 or posts. The considerable weight-bearing capacity of the elegant, precisely functioning E3 ensures that possible applications for Centor's bifold range are limited only by the imaginations of the world's most progressive architects and designers.

Engineered to withstand the most severe weather, E3 is just as suited to interior use. The ability to visually and physically connect spaces can be equally beneficial indoors and the sound-proofing effect of double-glazing equally important. The benefits to the end-user in flexibly managing interior or exterior space to suit lifestyle or business are literally changing the face of contemporary building design.

CREATING SPACE



High Performance System

Interior comfort, operational function, durability; painstaking attention to detail and an unerring commitment to quality mean 'Centor-grade' performance, whatever the category. The result is a degree of control and comfort for the end-user that matches the easy flexibility of modern design.

INTERIOR COMFORT

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

Rain and Wind

Centor hardware was utilised in the first tracked bifolding door system to be certified under Australian Standard AS2047, which specifies the weather performance required of external windows and sliding doors. Doors utilising the heavier E4 system have since passed all tests required for product approval from Florida's meticulous Miami-Dade County testing authorities – the single toughest standard of testing anywhere in the world from a region legendary for its coastal hurricanes and seasonal weather. With the same technology built into E3 impressive water performance ratings are achievable from both outward and inward opening doors. Driving rain and howling gales can be shut out completely.

Air Infiltration

The E3 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 E3 effectively resist air infiltration to a level up to 50 times better than a conventional sliding door.

Noise and Temperature

With double glazing allowed for by E3's impressive panel weight capacity, unprecedented levels of insulation against noise and temperature variation are 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 throughout their working life.

Quality Manufacture, Innovative Design

E3 carriers, guides and pivots use the highest grade stainless steel bearings custom machined to extremely fine tolerances on state-of-the-art German and Swiss machinery – a minimum of six bearings to each carrier. Machined wheels are individually precision ground to an ultra-fine hone. Innovative 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!

Assembly and Installation

With quick-fix surface-mounted fittings assembly and installation couldn't be easier. Comprehensive instructions are included and drill jigs are available to ensure precise placement of fittings.

Adjustment

While E3 is designed to operate flawlessly well into the future, built-in adjustment mechanisms make the system tolerant of an imperfect world. Surelock™, Centor's patented carrier pin locking system ensures that once heights are set they stay set, but should door panels swell or a newly built structure settle over time, the end-user can easily make vertical and lateral adjustments simply using a screwdriver.

COLLABORATIVE DESIGN PROCESS

E3's thoughtful design doesn't achieve the highest performance in all categories 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 door sets incorporating the E3 system to ensure that the highest criteria for completed and installed doors are met even in the most unusual applications.

Proven Durability

While Centor Architectural certainly enjoys its reputation for innovation, ensuring that products meet and exceed the highest standards for durability is just as much 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 extensive weather testing as part of complete door systems, all individual E3 components have been extensively laboratory tested, 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 parts rated to over 100,000 cycles.

Corrosion Testing

Stainless steel and engineering-grade plastics are used throughout the E3 system and are carefully selected to maximise performance in any environment. Centor conducts regular, thorough corrosion testing in a salt spray chamber, fixing hardware to various substrates to ensure that E3 will perform admirably even in the most exposed of coastal applications.

Structural Testing

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

Finite Element Analysis

Finite Element Analysis (FEA) is a computerised 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.

Hurricane Testing

In the course of obtaining approval under the stringent Miami-Dade County testing regime, doors based on the larger E4 system were subjected to hurricane strength wind loads, flexing the doors in and out five thousand times without component failure. Small and large missile impact testing was also performed as part of the single toughest testing process anywhere in the world.

E3 Up Close

Even a casual glance at the E3 system gives a strong impression of Centor's commitment to quality, but it's only upon closer inspection that the attention to detail really becomes apparent. Stacked with standard features and with an abundance of options to choose from, Centor E3 looks even better up close!

Materials and Finishes

E3 carriers, guides, pivots and hinges are available in brushed stainless steel for a modern industrial look, a PVD brass finish over stainless steel should a more traditional finish be required, or custom powdercoated in a range of colours. Head tracks and sills are produced in extruded aluminium with the option of satin, gold and bronze anodised or custom powdercoated finishes. Floor guide channels and sills are produced in aluminium in various finishes with black polypropylene liner.

Panel Size and Materials

Centor's innovative hinge system enables the use of uniform-sized door panels regardless of the door configuration ensuring maximum efficiency in door manufacture. Easily installed hardware can be teamed with door panels in timber, aluminium, PVC or fibreglass.

Design Features

A floating wall pivot is used to control door stile deflection and bowing on tall doors caused by wind loads or climatic conditions. Offset floor guides and floor pivots mean the guide channel is concealed beneath closed doors, while top-rolling function means performance is never compromised by debris in tracks.

Dropbolts

Easily installed with a dedicated router bit available from Centor, DF and DO dropbolts are available in a range of lengths and finishes to suit every E3 application. Available keyed and non-keyed, the clean-lined DF and DO dropbolts anchor doors firmly in the closed position 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.

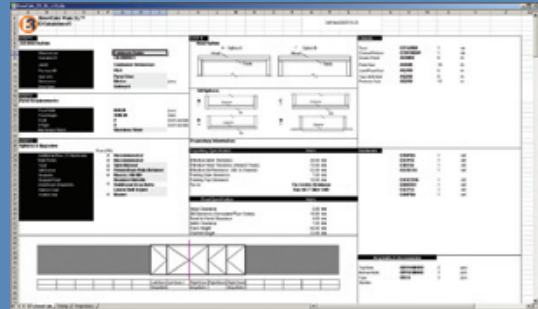
E3 Specifications	
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max panel weight	80kg
max panel height	3000mm
max panel width	1000mm
min panel thickness	35mm
max number of panels	16 (8 each direction)

Note: Specifications are intended as a guide only. Calculated weight check should be performed to ensure doors built to maximum height and width do not exceed maximum weight.



E3 Assurance

If success in modern design can be measured by the degree of comfort and ease afforded to the end-user, then Centor E3 again rates highly. E3's superior function and performance goes a long way to creating a relaxed setting while a range of other measures allow the system to be utilised with complete confidence.



Free Specification And Ordering Software

Doorcalc, Centor's free specification and ordering software simplifies component selection and assists with calculating size and number of door panels. Doorcalc can be downloaded from www.centoreurope.eu. It features intuitive drop-down menus to assist the inexperienced Excel® user.

CREATING CONFIDENCE

UNPARALLELED SECURITY

The E3 system responds to an increasingly security conscious market place with measures designed to ensure unwanted visitors are excluded – as well as the elements.

Concealed Fittings

When doors utilising E3 are closed there are no externally accessible parts that can be removed or damaged. Screw fixings are concealed.

Locking Screw Technology

The E3 system incorporates locking screw technology which ensures the E3 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.centoreurope.eu

HARDWARE SELECTION

E3 is a fully integrated system suitable for applications up to 80 Kg per panel in timber, aluminium, PVC or fibreglass. Architects and specifiers should feel comfortable simply specifying 'Centor E3' and leaving detailed component selection to the builder, joiner or fabricator.



4 CREATING CHOICE

Centor's Bifold Options

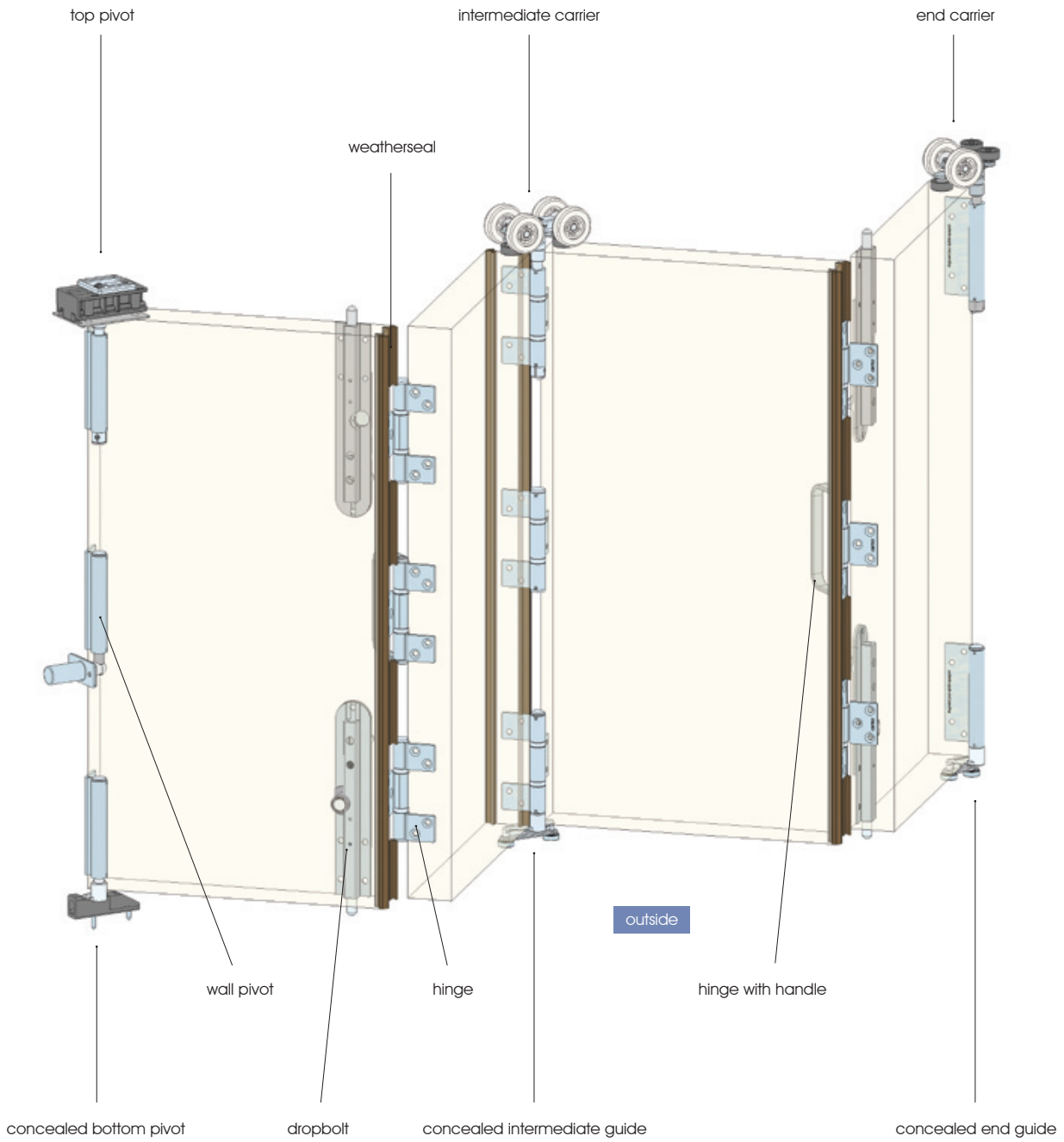
Based on the same functional geometry but with distinctive capacity and features, Centor's external bifold range offers an alternative for every application. From the smallest folding window to four metre high walls of framed glass panels which fold away in seconds, Centor bifold systems create a formidable barrier against the elements, yet glide open with finger-tip ease.



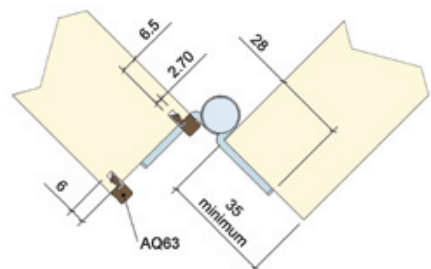
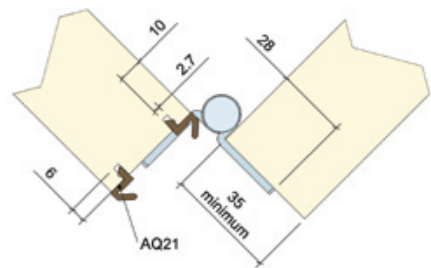
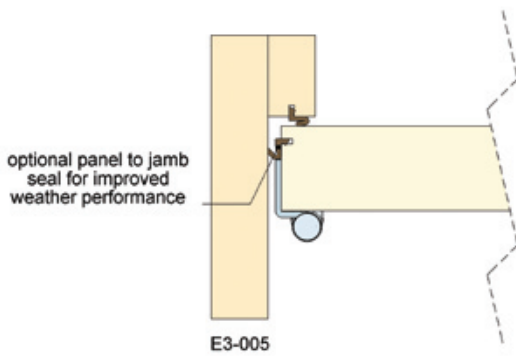
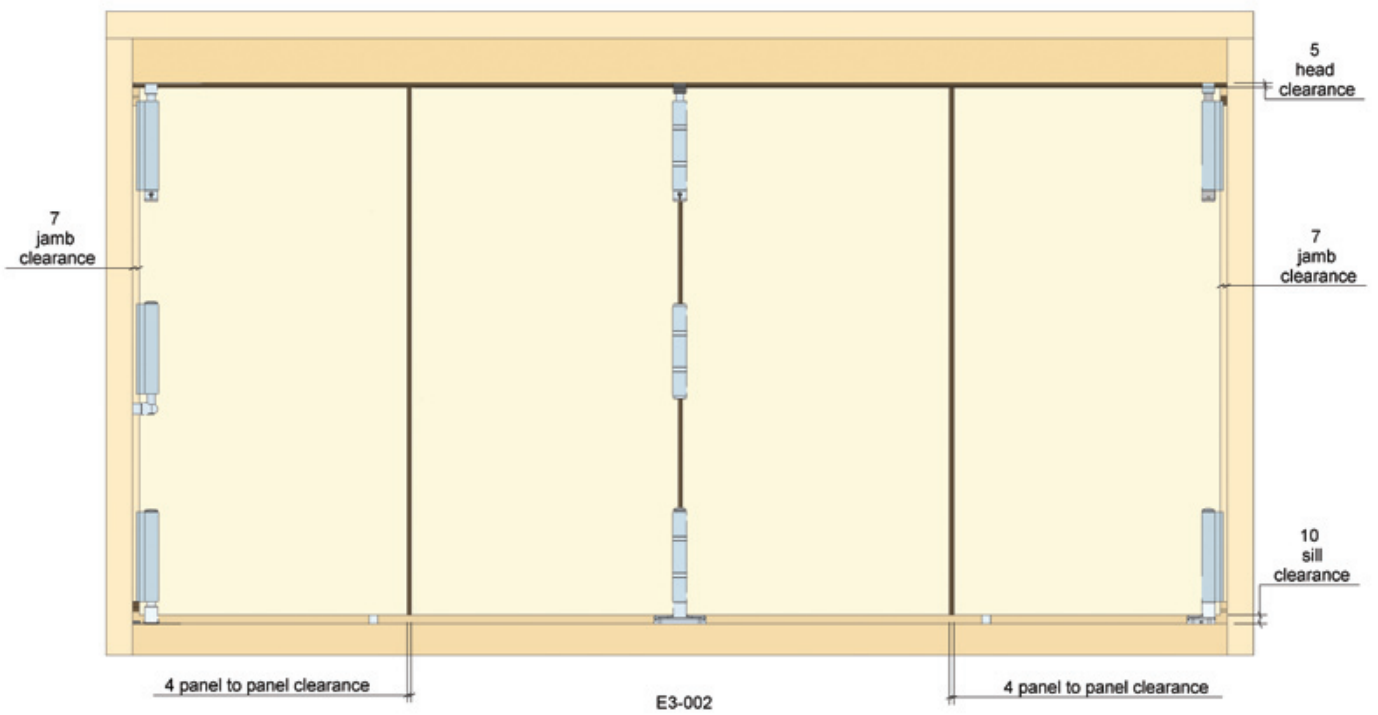
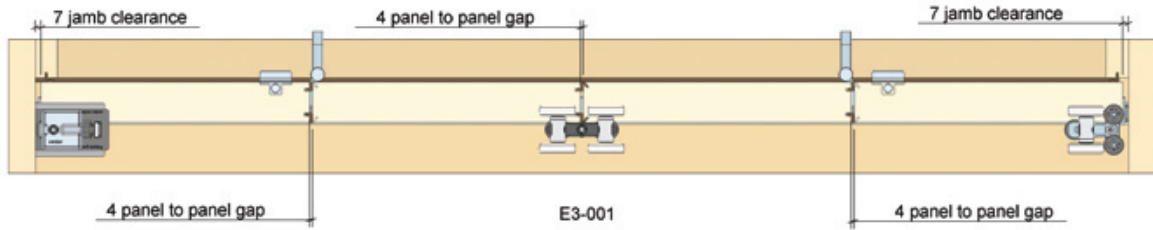
Developed first and constantly upgraded since their inception EW and E2 remain the perfect choice for the private residence or lighter commercial application. E3 and E4 are Centor's responses to the demands of architects and consumers wishing to expand the potential of bifold innovation into heavier-duty residential and commercial applications. The medium-heavy E3 doubles the panel weight capacity of the E2 system, making even sturdier panel materials and double glazing possible. The heavy-duty E4 system takes it even further. A massive panel weight capacity (120kg) and substantially increased height, width and overall measurement specifications ensures that Centor bifold systems remain the perfect choice for virtually every project.



E3 Product Details (outward opening configuration shown)

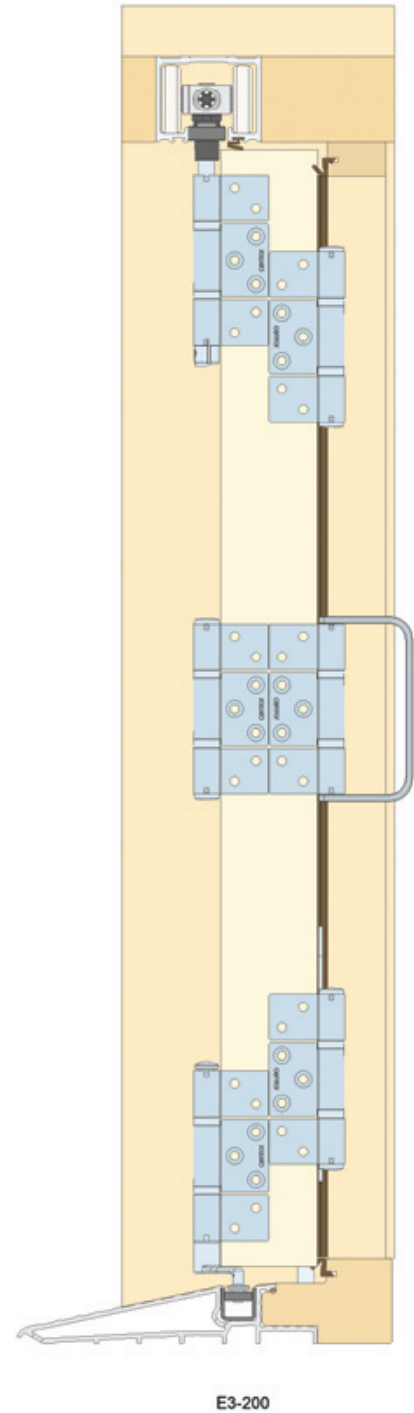
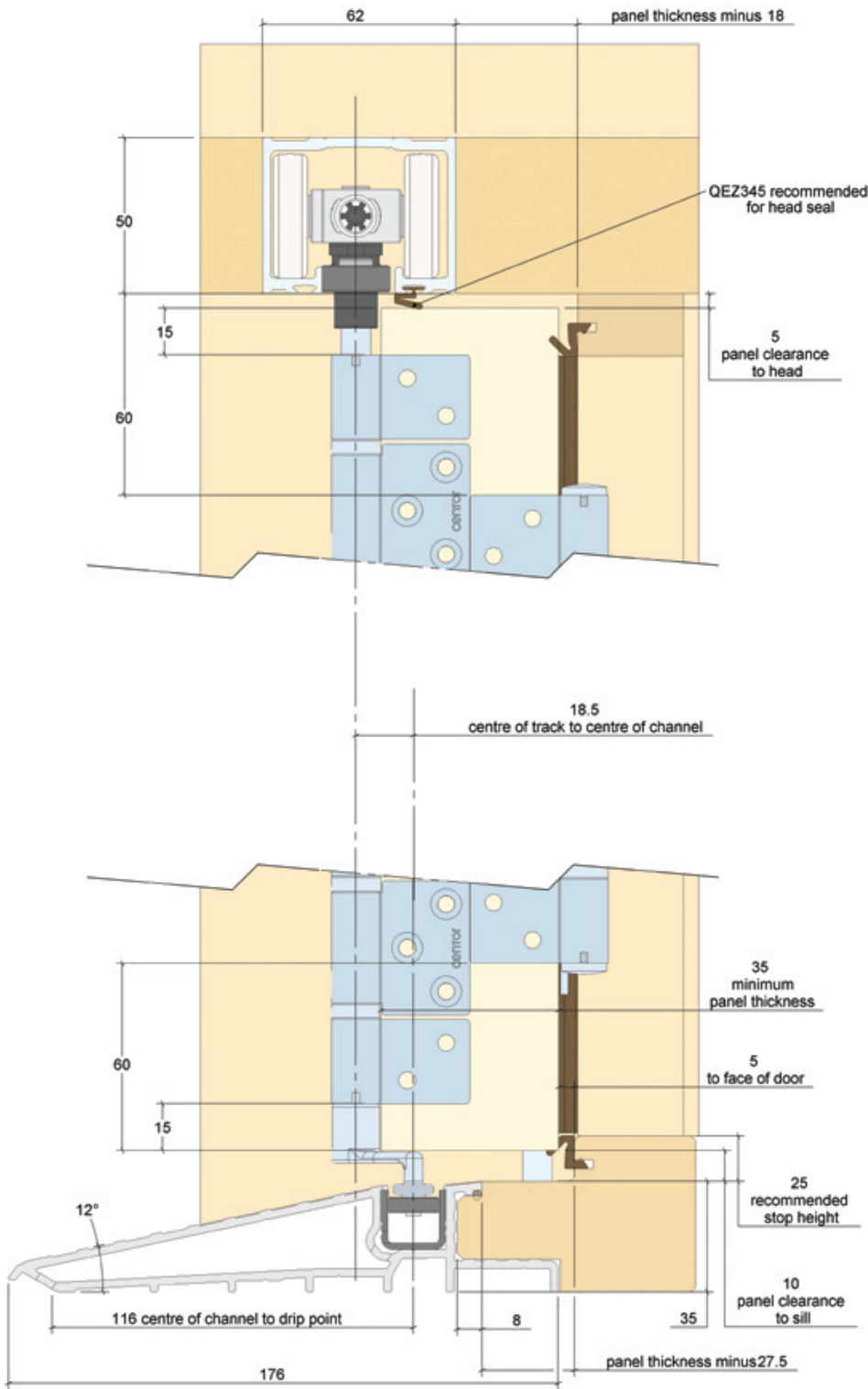


Architectural Detail



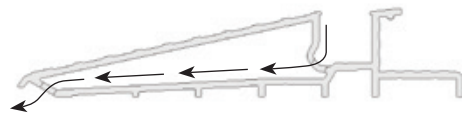
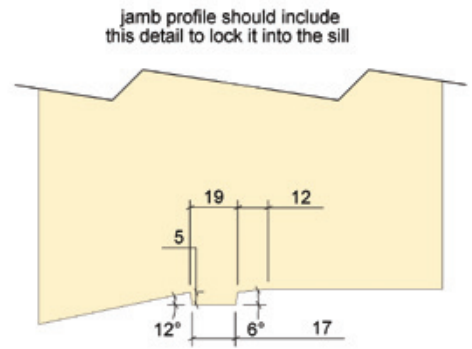
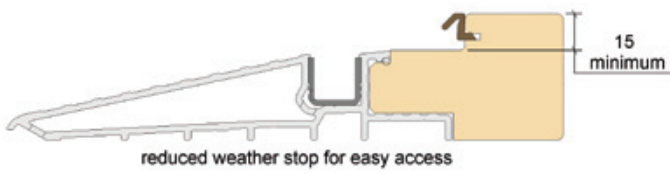
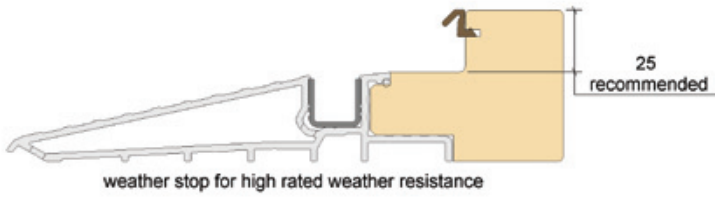
E3-006

Architectural Detail



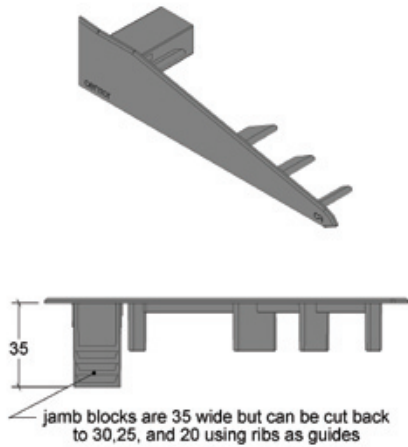
Architectural Detail

CONCEALED SELF DRAINING SILL FOR OUTWARD OPENING DOORS

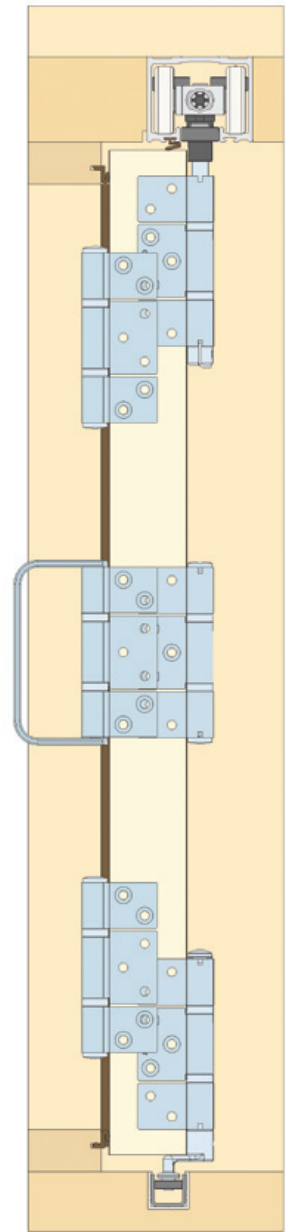
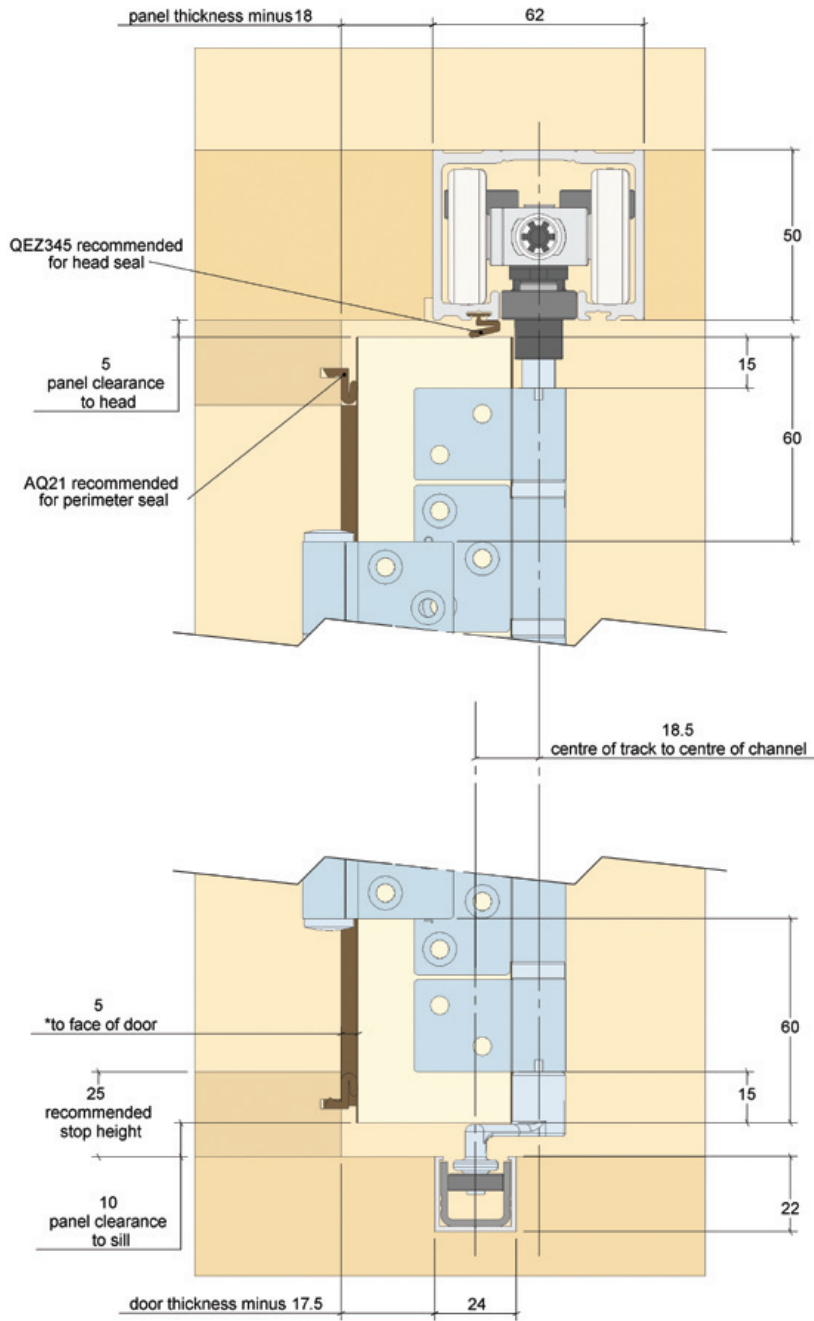


E3-201

END CAP



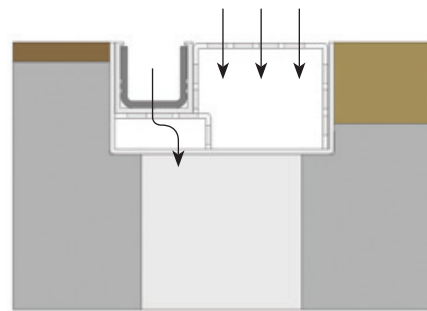
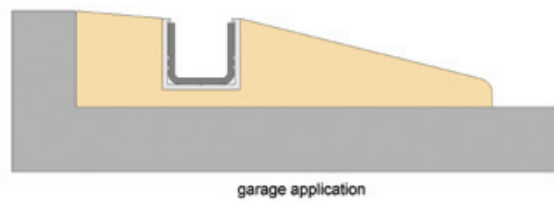
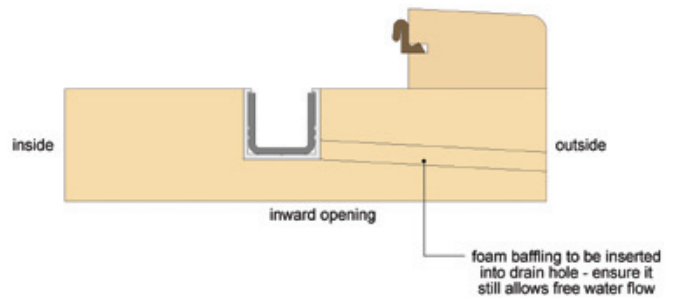
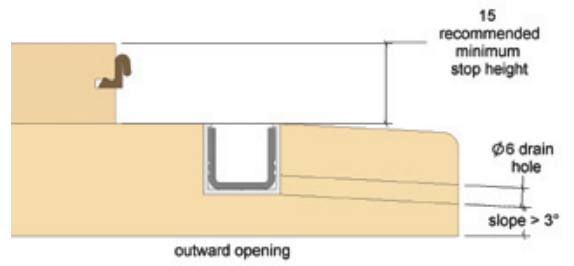
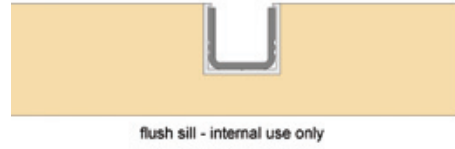
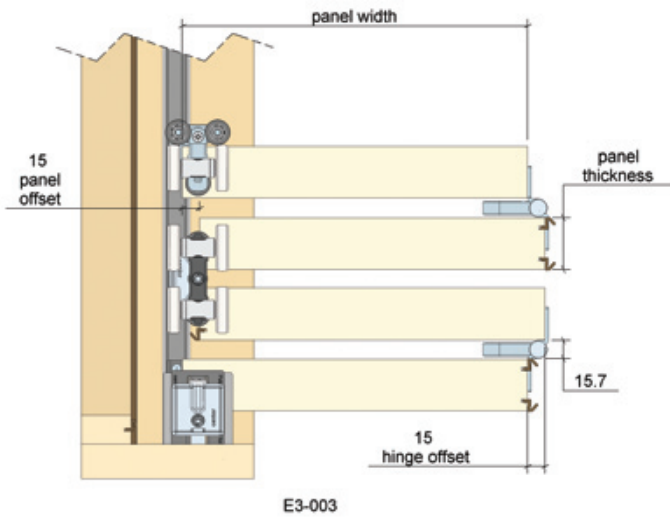
Architectural Detail (with Timber Sill)



E3-004

Architectural Detail

EQUAL SIZED PANELS



*timber profiles and drainage by others

Hardware Selection

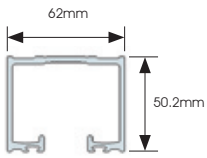
E3 is specified with 5 separate groups:

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

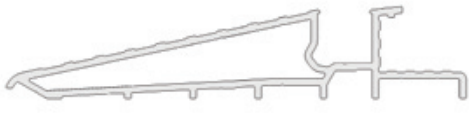

Components are required from all 5 groups to build an E3 folding door system.

TRACK

Track lengths up to 5.7m. Cut to length on application.

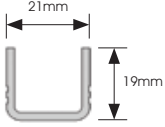
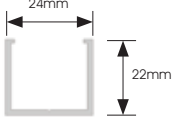
PART	TRACK	PRODUCT CODE	DESCRIPTION
	Aluminium track, machined	E3TAM18N	1730mm machined track, natural anodised
		E3TAM21N	2030mm machined track, natural anodised
		E3TAM24N	2330mm machined track, natural anodised
		E3TAM30N	2930mm machined track, natural anodised
		E3TAM36N	3530mm machined track, natural anodised
		E3TAM4N	4000mm machined track, natural anodised
		E3TAM42N	4130mm machined track, natural anodised
		E3TAMM57N	5700mm machined both ends track, natural anodised
		E3TAM24G	2330mm machined track, gold anodised
		E3TAM30G	2930mm machined track, gold anodised
		E3TAM4G	4000mm machined track, gold anodised
		E3TAMM57G	5700mm machined both ends track, gold anodised
		E3TAM30R	3000mm machined track, bronze anodised
		E3TAM4R	4000mm machined track, bronze anodised
		E3TAMM57R	5700mm machined both ends track, bronze anodised

OUTWARD CONCEALED SILL

PARTS	PRODUCT CODE	DESCRIPTION
	E3CDSM36N	3600mm concealed sill, machined, natural anodised
	E3CDSM42N	4200mm concealed sill, machined, natural anodised
	E3CDSM57N	5700mm concealed sill, machined, natural anodised
	E3CDSM36R	3600mm concealed sill, machined, bronze anodised
	E3CDSM42R	4200mm concealed sill, machined, bronze anodised
	E3CDSM57R	5700mm concealed sill, machined, bronze anodised
	E3CDSEC	end cap set (left and right)





Hardware Selection

CHANNEL

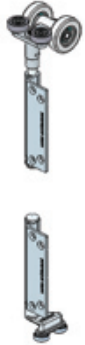

PARTS	CHANNEL	PRODUCT CODE	DESCRIPTION
	Concealed channel 21mm, poly channel	E22FCP18	1800mm floor channel, polypropylene
		E22FCP21	2100mm floor channel, polypropylene
		E22FCP24	2400mm floor channel, polypropylene
		E22FCP30	3000mm floor channel, polypropylene
		E22FCP36	3600mm floor channel, polypropylene
		E22FCP4	4000mm floor channel, polypropylene
		E22FCP42	4200mm floor channel, polypropylene
		E22FCP57	5700mm floor channel, polypropylene
	Concealed channel 24mm, retainer	E22FCR24N	2400mm floor channel retainer, natural anodised
		E22FCR3N	3000mm floor channel retainer, natural anodised
		E22FCR36N	3600mm floor channel retainer, natural anodised
		E22FCR4N	4000mm floor channel retainer, natural anodised
		E22FCR57N	5700mm floor channel retainer, natural anodised
		E22FCR24G	2400mm floor channel retainer, gold anodised
		E22FCR3G	3000mm floor channel retainer, gold anodised
		E22FCR36G	3600mm floor channel retainer, gold anodised
		E22FCR4G	4000mm floor channel retainer, gold anodised
		E22FCR57G	5700mm floor channel retainer, gold anodised
		E22FCR3R	3000mm floor channel retainer, bronze anodised
		E22FCR4R	4000mm floor channel retainer, bronze anodised
		E22FCR57R	5700mm floor channel retainer, bronze anodised

Hardware Selection

WEATHERSEAL



PART	PRODUCT CODE	PART DESCRIPTION
Perimeter 	AQ21B	Aquamac 21 Schlegel Kerf seal, brown
	AQ21L	Aquamac 21 Schlegel Kerf seal, black
	AQ21W	Aquamac 21 Schlegel Kerf seal, white
Panel to panel 	AQ63B	Aquamac 63 Schlegel Kerf seal, brown
	AQ63L	Aquamac 63 Schlegel Kerf seal, black
	AQ63W	Aquamac 63 Schlegel Kerf seal, white
Access panel 	AQ109B	Aquamac 109 Schlegel Kerf seal, brown
	AQ109L	Aquamac 109 Schlegel Kerf seal, black
	AQ109W	Aquamac 109 Schlegel Kerf seal, white
Head 	QEZ345B	Aquamac 345, head seal, brown
	QEZ345L	Aquamac 345, head seal, black
	QEZ345W	Aquamac 345, head seal, white

RIGHT CARRIER SET

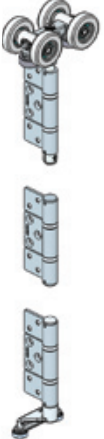



PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
		E3CRCSS	concealed right hand carrier set, stainless steel
		E3CRCSTG	concealed right hand carrier set, PVD brass
		E3CRCSQ	concealed right hand carrier set, oil rubbed bronze powdercoat

Hardware Selection

LEFT CARRIER SET

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
		E3CLCSS	concealed left hand carrier set, stainless steel
		E3CLCSTG	concealed left hand carrier set, PVD brass
		E3CLCSQ	concealed left hand carrier set, oil rubbed bronze powdercoat

INTERMEDIATE CARRIER SET (FOURTH HINGE RECOMMENDED FOR DOORS OVER 2250MM)

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION	
<p>a) </p> <p>b) </p>	<p>a) </p>	E3CICSS	concealed intermediate set, stainless steel	
		E3CICSTG	concealed intermediate set, PVD brass	
		E3CICSQ	concealed intermediate set, oil rubbed bronze powdercoat	
			Fourth Hinge	
			E3HNHS	single straight hinge, stainless steel
			E3HNHTG	single straight hinge, PVD brass
			E3HNHQ	single straight hinge, oil rubbed bronze powdercoat
	<p>b) </p>			

a) intermediate carrier set with concealed bottom guide
 b) fourth hinge recommended for doors over 2250mm

Hardware Selection

STRAIGHT HINGE SET

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
<p>a) </p> <p>b) </p>	<p>a) </p> <p>b) </p>	<p>E3HSS</p> <p>E3HSTG</p> <p>E3HSQ</p> <p>E3HNHSS</p> <p>E3HNHSTG</p> <p>E3HNHSQ</p>	<p>hinge set with handle, stainless steel</p> <p>hinge set with handle, PVD brass</p> <p>hinge set with handle, oil rubbed bronze powdercoat</p> <p>hinge set no handle, stainless steel</p> <p>hinge set no handle, PVD brass</p> <p>hinge set no handle, oil rubbed bronze powdercoat</p>

a) hinge set with handle for outward opening doors

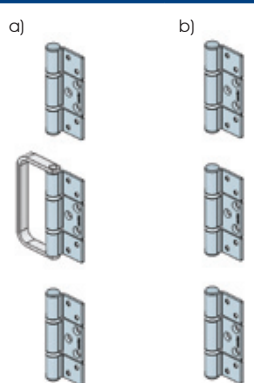
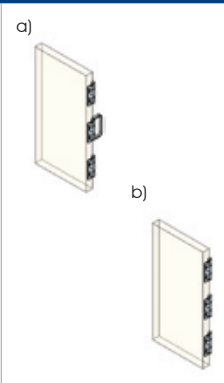
b) hinge set no handle for inward opening doors

SINGLE HINGE (FOURTH HINGE RECOMMENDED FOR DOORS OVER 2250MM)

PARTS	PRODUCT CODE	DESCRIPTION
	<p>E3HNHS</p> <p>E3HNHTG</p> <p>E3HNHQ</p>	<p>single straight hinge, stainless steel</p> <p>single straight hinge, PVD brass</p> <p>single straight hinge, oil rubbed bronze powdercoat</p>


Hardware Selection

HALF OFFSET HINGE SET

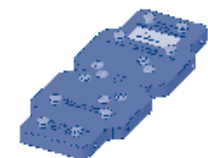
PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
 <p>a) b)</p>	 <p>a) b)</p>	E3HHSS	half offset hinge set with handle, stainless steel
		E3HHSTG	half offset hinge set with handle, PVD brass
		E3HHSQ	half offset hinge set with handle, oil rubbed bronze powdercoat
		E3HHNHSS	half offset hinge set no handle, stainless steel
		E3HHNHSTG	half offset hinge set no handle, PVD brass
		E3HHNHSSQ	half offset hinge set no handle, oil rubbed bronze powdercoat

a) half offset hinge set with handle for outward opening doors
 b) half offset hinge set with no handle for inward opening doors

SINGLE HALF OFFSET HINGE (FOURTH HINGE RECOMMENDED FOR DOORS OVER 2250MM)

PARTS	PRODUCT CODE	DESCRIPTION
	E3HHNHS	single half offset hinge, stainless steel
	E3HHNHTG	single half offset hinge, PVD brass
	E3HHNHQ	single half offset hinge, oil rubbed bronze powdercoat

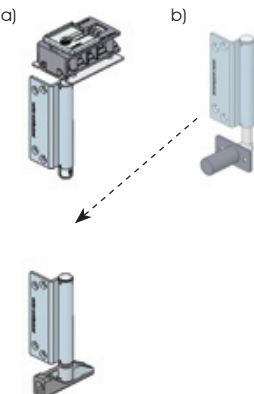

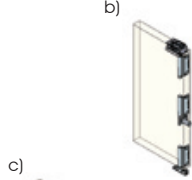

DRILL JIG

PARTS	PRODUCT CODE	DESCRIPTION
	E3DJ	E3 Drill Jig

Hardware Selection

PIVOT SET / WALL PIVOT

Wall pivots are mandatory on door panels over 2150mm. Wall pivots are strongly recommended on all door panels in wet or humid climates, exposed locations, inward opening applications and unstable timber doors. A second pivot can be used on door panels over 2250mm to match the additional row of hinges.



PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
		E3CPSS	concealed pivot set, stainless steel
		E3CPSTG	concealed pivot set, PVD brass
		E3CPSQ	concealed pivot set, oil rubbed bronze powdercoat
		E3WPSS	wall pivot set, stainless steel
		E3WPSTG	wall pivot set, PVD brass
		E3WPSQ	wall pivot set, oil rubbed bronze powdercoat
			

a) pivot set

b) pivot set and jamb mounted middle wall pivot mandatory on door panels over 2150mm to prevent/control deflection and bowing

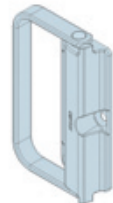

c) pivot set and two wall pivots to match hinge pattern on door panels over 2250mm

EXTERNAL HANDLE

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
		E3EHS	external handle, stainless steel
		E3EHTG	external handle, PVD brass
		E3EHQ	external handle, oil rubbed bronze powdercoat

single hinge with handle for inward application (please refer to Common Panel Layouts page 25 for more details)

INTERNAL HANDLE

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
		DF1IPH	internal pull handle, stainless steel

Dropbolts

Centor's stylish, flush-mounting dropbolts have been specifically designed for use with Centor systems and to meet the unique security and weatherproofing conditions that exist with bifolding doors. Easily installed with a dedicated router bit available from Centor, DF and DO dropbolts are available in a range of lengths and finishes to suit every application. Available keyed and non-keyed, DF and DO dropbolts are keyed alike or can be re-keyed.



CENTOR DF

Rated to resist the most extreme wind conditions (up to 450kg in certain timbers) DF dropbolts feature rounded styling and are suited to use with outward opening bifold doors. Available in 200mm, 400mm, 600mm and 1000mm lengths with a 20mm throw they come in gold anodised, brushed metallic, oil rubbed bronze and custom powdercoated finishes. Keyed DF dropbolts feature a unique bifold damage-proofing mechanism which prevents the bolt being operated while the key remains in the lock.




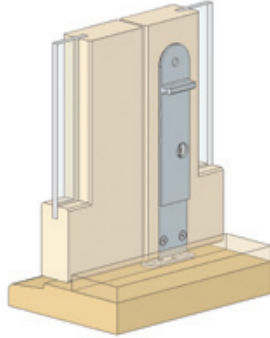
CENTOR DO

Offering all the style, security and choice of DF, DO dropbolts suit inward opening doors based on the E3 Concealed system. DO is installed at the top of the door panel while DO Concealed locks into the floor channel of the bifold system, meaning no extra holes or slots to drill or machine in the floor surface or door-sill. DO comes in gold anodised, brushed metallic, oil rubbed bronze and custom powdercoated finishes.


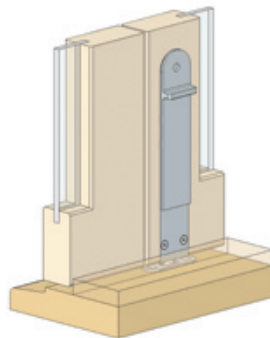


Dropbolts (for outward opening doors)

DF / KEYED

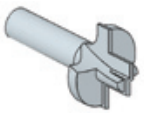
PARTS	ARCHITECTURAL DETAIL	PRODUCT CODE	DESCRIPTION
		DBFO200KRG	200mm dropbolt, keyed, gold anodised
		DBFO200KRX	200mm dropbolt, keyed, brushed metallic
		DBFO400KRG	400mm dropbolt, keyed, gold anodised
		DBFO400KRX	400mm dropbolt, keyed, brushed metallic
		DBFO600KRG	600mm dropbolt, keyed, gold anodised
		DBFO600KRX	600mm dropbolt, keyed, brushed metallic
		DBFO1000KRX	1000mm dropbolt, keyed, brushed metallic

DF / NON-KEYED

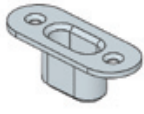
PARTS	ARCHITECTURAL DETAIL	PRODUCT CODE	DESCRIPTION
		DBFO200NRG	200mm dropbolt, non-keyed, gold anodised
		DBFO200NRX	200mm dropbolt, non-keyed, brushed metallic
		DBFO400NRG	400mm dropbolt, non-keyed, gold anodised
		DBFO400NRX	400mm dropbolt, non-keyed, brushed metallic
		DBFO600NRG	600mm dropbolt, non-keyed, gold anodised
		DBFO600NRX	600mm dropbolt, non-keyed, brushed metallic
		DBFO1000NRX	1000mm dropbolt, non-keyed, brushed metallic

Chrome, natural anodised and custom powdercoat available by special order.

ROUTER BIT


PART	PRODUCT CODE	DESCRIPTION
	DBFORB	dedicated router bit for professional installation of Centor Architectural DH, DF, DL, DY and DO dropbolts

CUPS

PART	PRODUCT CODE	DESCRIPTION
	DBCS	dropbolt cup, stainless steel
	DBCQ	dropbolt cup, oil rubbed bronze powdercoat
	DBCB	dropbolt cup, brass

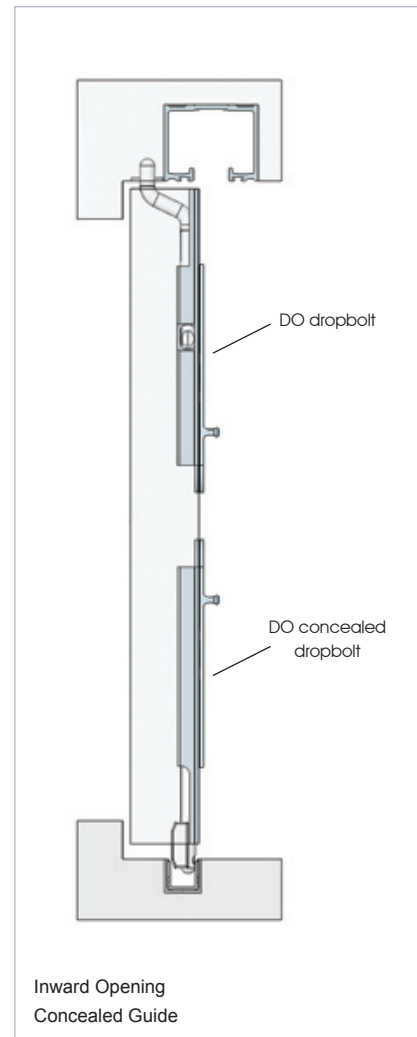
Dropbolts (Inward Opening)

DOe / KEYED (TOP OF DOORS)

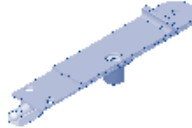
PARTS	PRODUCT CODE	DESCRIPTION
	DBOE200KRG	200mm, keyed, gold anodised
	DBOE200KRQ	200mm, keyed, oil rubbed bronze powdercoat
	DBOE200KRX	200mm, keyed, brushed metallic
	DBOE400KRG	200mm, keyed, gold anodised
	DBOE400KRX	200mm, keyed, brushed metallic
	DBOE600KRG	200mm, keyed, gold anodised
	DBOE600KRX	200mm dropbolt, keyed, brushed metallic

DOe / NON-KEYED (TOP OF DOORS)

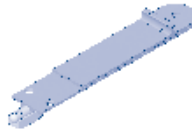
PARTS	PRODUCT CODE	DESCRIPTION
	DBOE200NRG	200mm, non-keyed, gold anodised
	DBOE200NRQ	200mm, non-keyed, oil rubbed bronze powdercoat
	DBOE200NRX	200mm, non-keyed, brushed metallic
	DBOE400NRG	200mm, non-keyed, gold anodised
	DBOE400NRQ	200mm, non-keyed, oil rubbed bronze powdercoat
	DBOE400NRX	200mm, non-keyed, brushed metallic
	DBOE600NRG	200mm, non-keyed, gold anodised
	DBOE600NRQ	200mm, non-keyed, oil rubbed bronze powdercoat
	DBOE600NRX	200mm, non-keyed, brushed metallic
	DBOE1000NRG	200mm, non-keyed, gold anodised
	DBOE1000NRQ	200mm, non-keyed, oil rubbed bronze powdercoat
	DBOE1000NRX	200mm, non-keyed, brushed metallic



DOc / KEYED (BOTTOM OF DOORS, FOR CONCEALED FLOOR CHANNEL)

PARTS	PRODUCT CODE	DESCRIPTION
	DBOC200KRG	200mm, concealed, keyed, gold anodised
	DBOC200KRQ	200mm, concealed, keyed, oil rubbed bronze powdercoat
	DBOC200KRX	200mm, concealed, keyed, brushed metallic

DOc / NON-KEYED (BOTTOM OF DOORS, FOR CONCEALED FLOOR CHANNEL)

PARTS	PRODUCT CODE	DESCRIPTION
	DBOC200NRG	200mm, concealed, non-keyed, gold anodised
	DBOC200NRQ	200mm, concealed, non-keyed, oil rubbed bronze powdercoat
	DBOC200NRX	200mm, concealed, non-keyed, brushed metallic

Chrome, natural anodised and custom powdercoat available by special order.

Door Size Calculation

To calculate the dimensions of the doors or openings we strongly recommend using Centor's "Doorcalc" program, which is a Microsoft Excel spreadsheet (download from www.centoreurope.eu). To manually calculate door sizing for an opening, follow the following steps:

- 1 Prepare a basic sketch of your door opening (see worked example), to visualize clearances and check sizes.
- 2 The calculation is based on all panels being equal width, using half-offset hinges. Note that the allowance between each panel is 4mm although hinge thickness is less – this allowance has been determined by consultation with fabricators as the best approximation for calculation. Clearance between hinges and hinge pins, coupled with the pressure from compression seals accounts for the allowance being larger than the nominal hinge flap thickness.

3 Recommended clearances are as follows;

- Jamb to panel (door closed) 7 mm
- Panel to panel (door closed) 4 mm
- Top of panel to head 5 mm
- Bottom of panel to sill 10mm

4 Panel width W

Opening width L

Total number of panels N

$$\text{Panel width is: } \frac{W = L - 14 - (4 \times (N - 1))^{**}}{N}$$

WORKED EXAMPLES

Clear opening size 2425 high x 4200 wide (L), and a 3L x 2R arrangement.

$$\frac{W = 4200 - 14 - (4 \times (5 - 1))}{5}$$

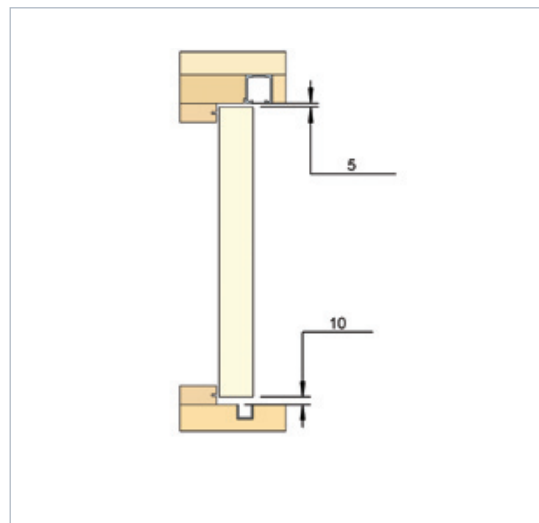
$$W = 834\text{mm}$$

Check against your door layout:

$$L = 2(7.0) + 4(4) + 5(834) = 4200 \text{ (OK)}$$

The panel height is the opening height less the nominal top and bottom clearances:

$$\text{Panel Height } H = 2425 - 5 - 10 = 2410\text{mm}$$



**** Note:** for even sets, eg 2L2R or 4L2R, the meeting gap would be larger – double seals are used to close the gap.

$$\frac{W = L - 14 - (4 \times N)}{N}$$

Note: Special amendments should be made for thick panels, narrow panels, even number configurations, and doors likely to expand by more than 1mm per panel.

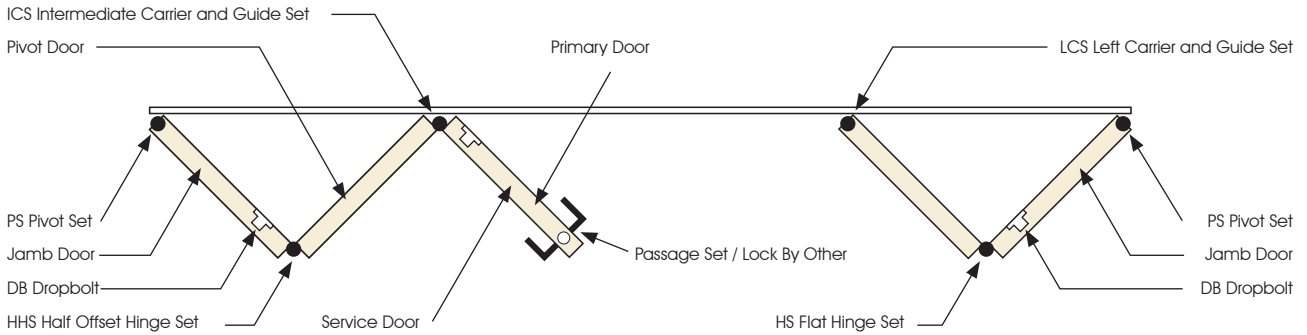
Common Panel Layouts

HARDWARE LEGEND	
PS pivot set	RCS right carrier set
WPS wall pivot set	HHS half offset hinge set
ICS intermediate carrier set	HS hinge set (straight)
LCS left carrier set	DB dropbolt
IPH internal pull handle	EH external handle

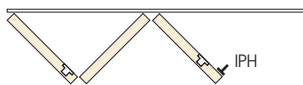
LEGEND	
Passage set / Lock by other	
Dropbolts top and bottom	

> Note Wall Pivot Set recommended for doors over 2250mm in height.

HARDWARE APPLICATION (3L2R)



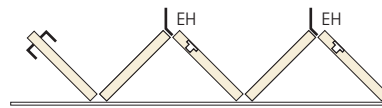
OUTWARD APPLICATION EXTERIOR HANDLE OPTION



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

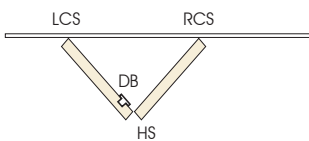
> Note Exit door not accessible from exterior in this application.

INWARD APPLICATION EXTERIOR HANDLE OPTION

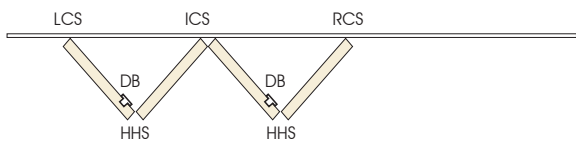


Use one exterior handle on each pair of doors (inswing system) to pull open and close doors

TWO FLOATING DOOR



FOUR FLOATING DOOR



Common Panel Layouts (outward)

CODE	OPENING CONFIGURATION	HARDWARE
2L	inside WPS, PS not accessible from exterior outside	1 x pivot set 1 x wall 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 2 x wall 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 wall 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 2 x wall 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 wall 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 WPS, PS outside	2 x pivot set 2 x wall 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 2 x wall 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 1 x wall 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 wall 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 1 x wall 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 wall 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 ICS WPS, PS outside	2 x pivot set 2 x wall 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 2 x wall pivot set 3 x intermediate carrier set 1 x hinge set 2 x half offset hinge set 8 x dropbolt

CODE	OUTWARD OPENING CONFIGURATION	HARDWARE
2R	<p>inside PS, WPS not accessible from exterior</p> <p>outside LCS HS</p>	<ul style="list-style-type: none"> 1 x pivot set 1 x wall pivot set 1 x left carrier set 1 x hinge set 2 x dropbolt
1L2R	<p>inside WPS, PS WPS, PS</p> <p>outside LCS HS</p>	<ul style="list-style-type: none"> 2 x pivot set 2 x wall pivot set 1 x left carrier set 1 x hinge set 2 x dropbolt
3R	<p>inside ICS WPS, PS</p> <p>outside HHS</p>	<ul style="list-style-type: none"> 1 x pivot set 1 x wall pivot set 1 x intermediate carrier set 1 x half offset hinge set 2 x dropbolt
1L3R	<p>inside WPS, PS ICS WPS, PS</p> <p>outside HHS</p>	<ul style="list-style-type: none"> 2 x pivot set 2 x wall pivot set 1 x intermediate carrier set 1 x half offset hinge set 4 x dropbolt
2L2R	<p>inside WPS, PS RCS LCS WPS, PS not accessible from exterior</p> <p>outside HS HS</p>	<ul style="list-style-type: none"> 2 x pivot set 2 x wall pivot set 1 x right carrier set 1 x left carrier set 2 x hinge set 4 x dropbolt
1L4R	<p>inside WPS, PS LCS ICS WPS, PS</p> <p>outside HHS HHS</p>	<ul style="list-style-type: none"> 2 x pivot set 2 x wall pivot set 1 x intermediate carrier set 1 x left carrier set 2 x half offset hinge set 4 x dropbolt
4R	<p>inside LCS ICS WPS, PS not accessible from exterior</p> <p>outside HHS HHS</p>	<ul style="list-style-type: none"> 1 x pivot set 1 x wall pivot set 1 x intermediate carrier set 1 x left carrier set 2 x half offset hinge set 4 x dropbolt
2L3R	<p>inside WPS, PS RCS ICS WPS, PS</p> <p>outside HS HHS</p>	<ul style="list-style-type: none"> 2 x pivot set 2 x wall pivot set 1 x intermediate carrier set 1 x right carrier set 1 x hinge set 1 x half offset hinge set 4 x dropbolt
5R	<p>inside ICS ICS WPS, PS</p> <p>outside HS HHS</p>	<ul style="list-style-type: none"> 1 x pivot set 1 x wall pivot set 2 x intermediate carrier set 1 x hinge set 1 x half offset hinge set 4 x dropbolt
3L4R	<p>inside WPS, PS ICS LCS ICS WPS, PS</p> <p>outside HHS HHS HHS</p>	<ul style="list-style-type: none"> 2 x pivot set 2 x wall pivot set 2 x intermediate carrier set 1 x left carrier set 3 x half offset hinge set 6 x dropbolt
7R	<p>inside ICS ICS ICS WPS, PS</p> <p>outside HS HS HHS</p>	<ul style="list-style-type: none"> 1 x pivot set 1 x wall pivot set 3 x intermediate carrier set 2 x hinge set 1 x half offset hinge set 6 x dropbolt
2L5R	<p>inside WPS, PS RCS ICS ICS WPS, PS</p> <p>outside HS HS HHS</p>	<ul style="list-style-type: none"> 2 x pivot set 2 x wall 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	<p>inside LCS ICS ICS ICS WPS, PS not accessible from exterior</p> <p>outside HHS HS HS HHS</p>	<ul style="list-style-type: none"> 1 x pivot set 1 x wall pivot set 3 x intermediate carrier set 1 x left carrier set 2 x hinge set 2 x half offset hinge set 8 x dropbolt

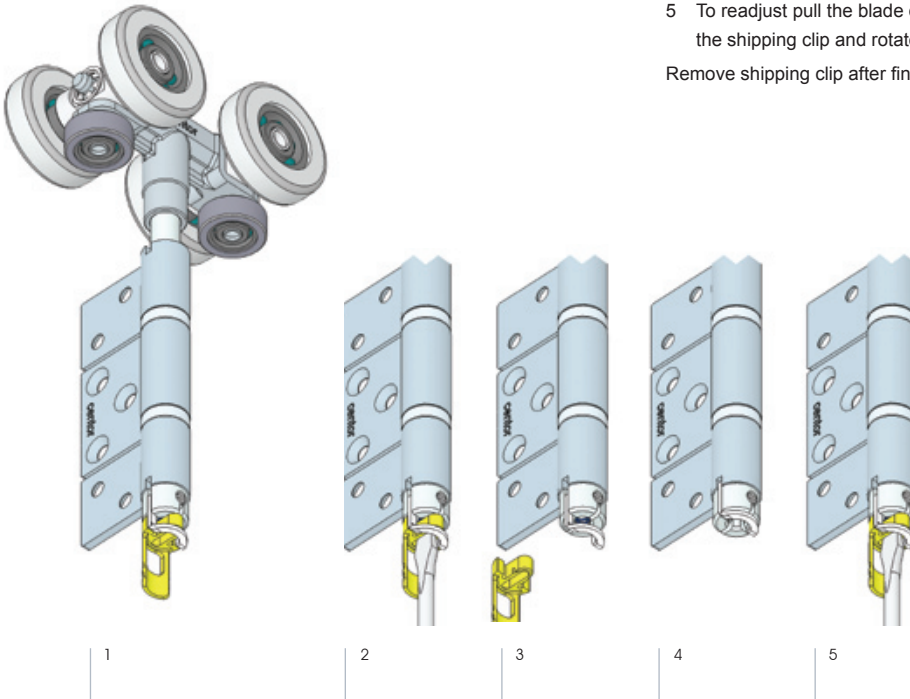
CREATING FLEXIBILITY

Surelock™ Adjustment

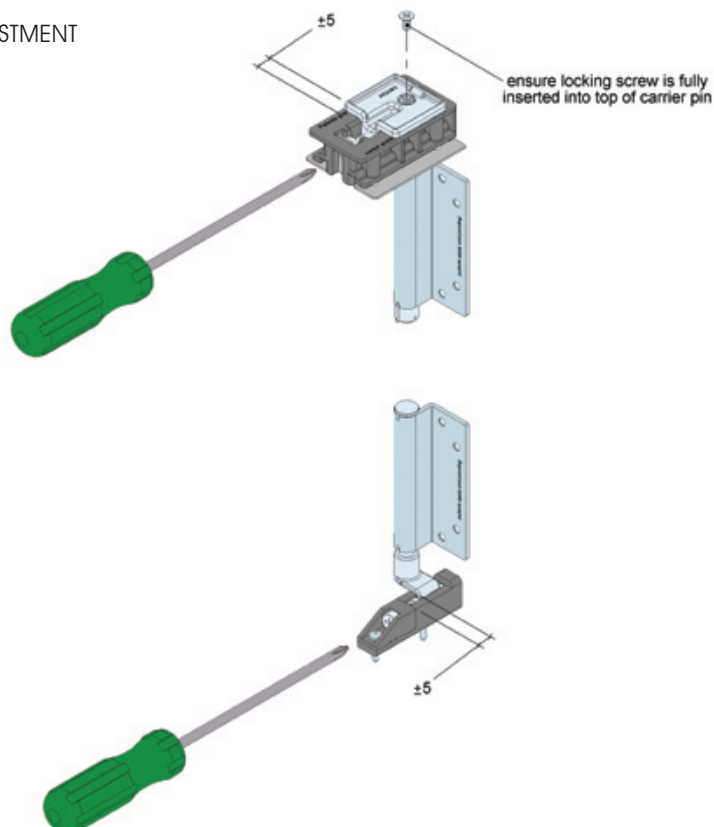
Surelock™ is Centor's patented carrier pin locking system which ensures that once door heights are set at the top pivots, intermediate and end carriers, they stay set!

- 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.

Remove shipping clip after final installation adjustment.



LATERAL ADJUSTMENT



E2

E2 is a medium bifolding door hardware system for panels to 40 Kg. E2 is suitable for a range of residential and light commercial applications which do not require the extra capacity of the medium-heavy E3 or the substantial E4 heavy-duty door system. Easily installed E2 hardware can be teamed with standard door panels in timber, aluminium, PVC or fibreglass.



E4

Centor Architectural's most generously proportioned solution for creating seamless transitions between indoor and outdoor spaces. E4 is heavy-duty bifolding door hardware for panels to 120 Kg. E4 is suitable for openings in larger residential and commercial applications. Taller, wider door panels, expanses of framed glass; E4 provides the flexibility to manage space for lifestyle or business – on a grand scale.



DROPBOLTS

Centor's stylish keyed and non-keyed, flush-mounting dropbolts are the ideal solution for securing or fastening in place closed folding or sliding windows and doors. Produced to Centor's exacting standards for functionality, aesthetics and longevity, seven distinctive dropbolt ranges are available in lengths, styles and finishes to suit virtually any application.



ES2

Centor's door screening system for bifold doors is integrated into the bifolding door frame itself. This new system, a superbly effective, world-first fully integrated screening solution for openings as large as 3m high and 5.8m wide, means there's no need to compromise between uninterrupted views and unrestricted movement in the summer months and the need to eliminate annoying flying pests year-round.





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