# **VELFAC**<sup>®</sup> WINDOWS FOR LIFE

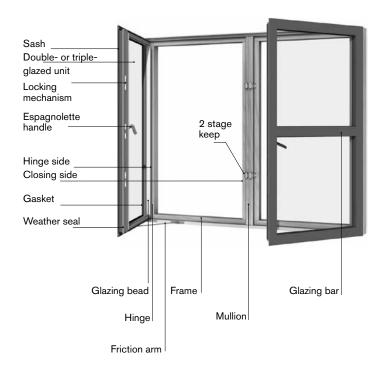
# WINDOWS & DOOR DESIGN GUIDE EDITION 9, OCTOBER 2018 ONWARDS

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#### INTRODUCTION

Thank you for your enquiry in relation to our products. All of our windows and doors are purpose made to your requirements and this guide aims to assist you in understanding your VELFAC windows and doors and assist you whilst preparing your full and final information.



#### USING THIS GUIDE

On the following pages we have described how to specify the options available.

The adjacent illustration shows some of the terms used in relation to windows and doors.

You can also find inspiration and information regarding the choices available at our web site: **www.velfac.co.uk** 

Each section of this guide will inform you about the choices available for your chosen window or door system .

You may also find it useful to have the following to hand preparing your full and final information.

- Your VELFAC quotation
- Our 'Windows for Life' Brochure
- Our Installation guide

If you require any assistance in finding the most suitable product for your application or if you would like any help in completing your full and final information please do not hesitate to contact your sales coordinator on their direct number alternatively contact us on 01536 313552 and we will forward you onto your sales coordinator.



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## **1. VELFAC PRODUCT TYPES**





**VELFAC 200 Series** are outward opening timber/aluminium composite, defined by a single sight line of frame, which provides elegant design and no difference in appearance between fixed and opening windows. The design of the system also protects the perimeter weather seal as it is recessed from the face of the window. The windows are supplied with either 24mm or 48mm wide insulating glass units. NB: care must be taken to allow sufficient perimeter clearance to ensure that the window operation is not affected.

#### NB. VELFAC V200 casement doors (CDO & SCD) are fitted with an internal handle only and are not accessible from the outside.

**VELFAC IN Series** are inward opening timber/aluminium windows and Juliette doors, for use e.g. in upper floor applications with Juliette balcony situations where physical obstruction requires inward opening function. They have an opening sash contained within a perimeter frame and are supplied with 48mm wide insulating glass units.

NB. VELFAC In Juliette doors have espagnolette handles inside only and offer no external access.



**VELFAC Ribo Access Door Series** are timber/aluminium composite doors supplied as a glazed door (with glass and/or panel infill) or as a flush door with a variety of surface finishes, details and glass apertures. The VELFAC Ribo range is available as inward or outward opening and in both single and double leaf versions and glazed doors are supplied with 32mm wide insulating glass units.

NB. VELFAC Ribo Access doors have handles inside and outside and offer external access.

Further information on our products can be found in our Windows For Life brochure available from **www.VELFAC.co.uk.** 

#### 1.1. AVAILABLE WINDOW OPENING FUNCTIONS

Drawing / designation (1)	Function/ Description	In	V200	Note
Hrge side	Outward opening – Sidehung window	NA	SHO	
Hinge side	Outward opening – Sideguided window	NA	SGO	Allows internal cleaning (2)
$\square$	Fixed casement	NA	FC	
	Outward opening – Topguided window	NA	TGO	
	Outward opening – Reversible window	NA	THRO	Allows internal cleaning (2)
Hngo sido	Outward opening – Sidehung casement door	NA	CDO	Also available as 2 leaf french casement door Internal handle only
-	Outward opening – Sliding casement door	NA	SCD	Also available as 2 leaf bi-parting door (3) Internal handle only
Hingo sido	Inward opening – Tilt before turn window	TITU	NA	Allows internal cleaning (2)
HINGO SAGO	Inward opening – Tilt before turn Juliette door	TITUD	NA	Also available as 2 leaf french casement Juliette door Internal handle only

Table 1 – Product variations and options

#### Notes:

(1) VELFAC use European window and handing designation, i.e. the chevron points to the window handle.
(2) Please refer to Building Regulations Approved Document N for compliance on internal cleaning of windows
(3) Bi-parting doors will be 4 panes wide with centre 2 panes sliding in front of the outer 2 panes. The central mullion moves with secondary sliding leaf to create an unobstructed opening.

**NB:** Please note opening function chevron designation and text abbreviation (i.e TGO).

## 1.2. BASIC WINDOW SECTIONS & OPENING FUNCTIONS (VELFAC 200 & VELFAC IN)

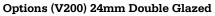
System / section	Opening function	Note
V200 outward opening – standard window frame (Not SCD sliding casement door)	SHO – Sidehung SGO – Sideguided FC – Fixed TGO – Topguided THRO – Reversible	Timber frame available in 90mm, 115mm, 140mm dimensions. Refer to system details at www.VELFAC.co.uk
V200 outward opening – casement door threshold (Not SCD sliding casement door)	CDO – Casement door	Standard threshold for V200 casement doors
V200 outward opening – casement door low threshold option (Not SCD sliding casement door)	CDO – Casement door	Alternative low threshold for V200 casement doors
V200 ENERGY outward opening – sliding casement door with 25mm threshold	SCD – Sliding casement door	V200E sliding casement door with low threshold
V200 outward opening – sliding casement door with 70mm threshold	SCD – Sliding casement door SCD, 2-leaf – Bi-parting door	V200 sliding casement door with high threshold
V200 outward opening – sliding casement door sidelight frame	SCD – Sliding casement door SCD, 2-leaf – Bi-parting door	Aluminium tread removed at sidelight when delivered as a separate unit
VELFAC In inward opening window and Juliette door frame	TITU – Tilt / Turn window TITUD – Tilt / Turn Juliette door	Standard timber window frame for all VELFAC In windows. Juliette door thres- holds are made of mahogany

Table 2 – Basic product sections

**NB:** V200 casement doors (CDO) are supplied with 90 degree hinges and friction arm as standard. They can be supplied with 180 degree parliament hinges (zinc chromated steel finish only).Please be aware 180 degree hinged doors do not have a friction arm, are free swinging and can be set back from the structure no more than 40mm).

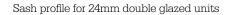


## **1.3. WINDOW VARIATIONS**



V200 outward opening window system - Sash & glazing options





V200 outward opening window system

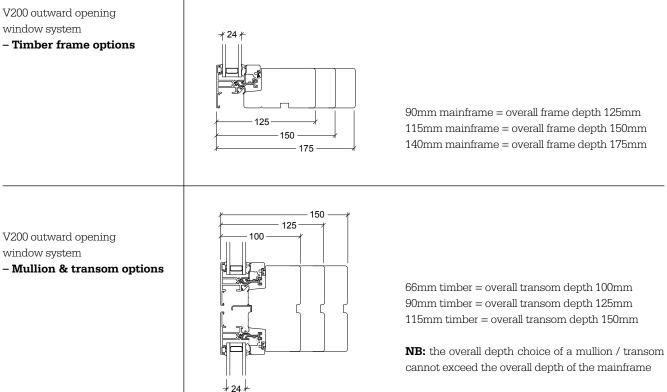


Table 3 – Product variations and options



#### Window variations – Cont. Options (V200E) 48mm Triple Glazed

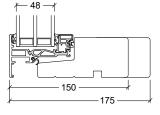
V200E outward opening window system - Timber frame options



Sash profile for 48mm triple glazed units

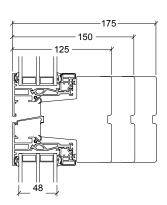
V200E outward opening window system

– Mullion & transom options



115mm mainframe = overall frame depth 150mm 140mm mainframe = overall frame depth 175mm

V200E outward opening window system - Sash & glazing options



90mm timber = overall transom depth 125mm 115mm timber = overall transom depth 150mm 140mm timber = overall transom depth 175mm

**NB:** the overall depth choice of a mullion / transom cannot exceed the overall depth of the mainframe

Table 4 – Product variations and options



## 1.4. ACCESS DOORS SECTIONS (VELFAC RIBO ALU DOOR)

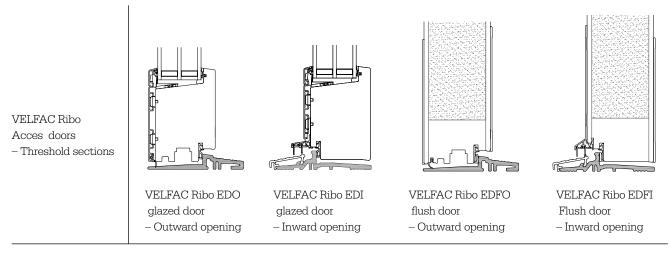


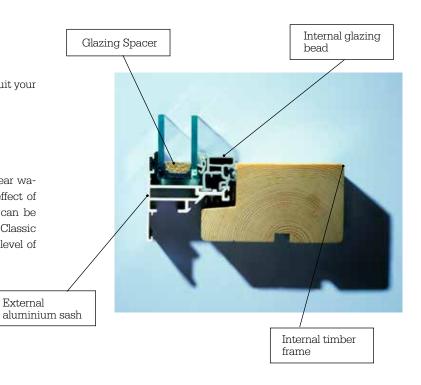
Table 5 – VELFAC Ribo Access doors threshold sections

#### **2. FINISHES**

We can supply our products in large choice of colours to suit your requirements.

#### 2.1. WINDOW FINISHES

The internal timber window frame can treated with a clear water based lacquer to take full advantage of the natural effect of the Scandinavian pine. Alternatively, the timber frame can be finished in a number of colours from the standard RAL Classic colour range. Internal finishes are supplied with a gloss level of  $20\%\pm5$ .





The colour of the internal glazing bead (located between the timber frame and the inside face of the glass) will be automatically selected from our 3 standard colours:

RAL 7035 Grey – for clear finished and light coloured internal frames RAL 9010 White – for white finished internal frames RAL 9005 Black – for dark coloured internal frames

 $\ensuremath{\textbf{NB:}}\xspace$  glazing spacer is supplied in light grey colour (or black only if a black bead is chosen).

Externally, the aluminium sashes are supplied in a hard wearing polyester powder coated finish taken from the standard RAL colour range with a gloss level of 77%±8. You can find further information on the RAL colour system at www.ralcolor.com.

Please note that due to differences in printing process and visual display devices, there may be a variation in colours printed or viewed on screen and the finished product. VELFAC are not able to take responsibility for shading differences.

#### 2.2. VELFAC RIBO DOOR FINISHES

VELFAC Ribo doors are supplied as per the window finishes described above, with the exception of the flush door sash, which cannot be supplied with a clear lacquered finish internally.

**NB:** There is a visible difference in timber knotting between VELFAC Ribo, VELFAC In and V200 products. A painted finish is recommended when coupling 2 systems. **NB:** Glazing spacer is only available in light grey colour

## **3. GLAZING**

VELFAC offer a range of glazing to suit your requirements. Glazing is supplied as either double or triple pane insulating glass units. Clear energy safety glass will be supplied as standard to all windows. Obscure glazing is available for use in areas where privacy is required such as bathrooms and entrance areas.

Please refer to the table below which shows the various insulating glass units available for each of the window and door systems and the adjacent image which shows the available obscure glass options.

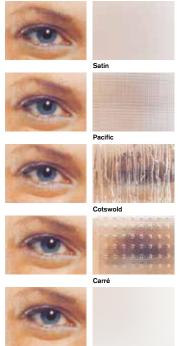
If you have specific glazing needs, please contact us to discuss your requirements.

System	24 mm double glazing	32 mm double glazing	48 mm triple glazing	52 mm triple glazing
V200 windows	YES		YES	
VELFAC In windows			YES	
Ribo doors		YES		YES

Table 6 - Insulating glass unit sizes by product type







Matt Lam.

## 4. WINDOW AND CASEMENT DOOR HANDLES AND ACCESSORIES

Windows and casement doors are supplied with a standard espagnolette handle unless otherwise agreed.

#### 4.1. V200 HANDLE OPTIONS



**Espagnolette.** Standard in all opening functions.



**Espagnolette with lock.** Supplied with lock and key for extra security.



**Espagnolette with childlock.** Supplied with child-lock button.



Ventilation position. The striking plate allows a 5mm ventilation opening for all espagnolette handles.



**External handle** for VELFAC CDO and SCD. Supplied separately.



**Flushbolt** for operation of the mullion in 2-leaf elements.



VELFAC maxi-handle. For all espagnolettes. The warm and non-slip surface makes life easier for disabled. Supplied separately.



Espagnolette with handle operated brake. For all espagnolettes. Can hold the casement door in any open position from approx. 10-85°.

#### 4.2. VELFAC IN HANDLE OPTIONS



Aluminum-handle. Natural anodised surface finish.



Aluminum-handle with child-lock. Natural anodised surface finish.



Aluminum-handle with lock. Natural anodised surface finish.



**Flushbolt.** Operates the French casement in 2-leaf elements.



#### 4.3. V200 ACCESSORY OPTIONS



Friction brake. Standard in SHO, SGO, TGO, THRO and CDO. CDO are standard with 90° hinge.



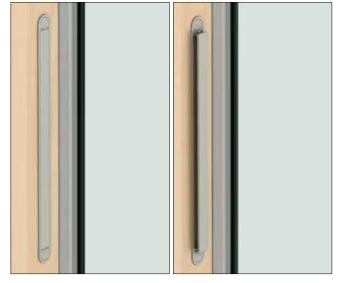
**180° hinge for CDO.** Not available with friction brake. Will influence the glass weight restrictions of the casement door.



Standard restrictor. Not available for VELFAC SCD.



Lockable restrictor. Not available for VELFAC SCD.



**Click vent.** Anodized surface finish. Fully concealed. Free ventilation opening in elements with 24mm glazing: 4000mm<sup>2</sup>. Free ventilation opening in elements with 48mm glazing: 3000mm<sup>2</sup>.

	<b>V200</b> 24mm double glazing		<b>V200E</b> 48mm triple glazing		
Free area	4000mm <sup>2</sup>		4000mm <sup>2</sup> 3000mm <sup>2</sup>		
	Head	Jamb	Head	Jamb	
Equivalent free area	2418mm <sup>2</sup>	2800mm <sup>2</sup>	1614mm <sup>2</sup>	2737mm <sup>2</sup>	

#### 4.4. VELFAC IN ACCESSORY OPTIONS



**90° opening restrictor.** Standard in sidehinged sashes.



**Preparation for barrier solution.** Fittings and packers are supplied, barrier should be sourced from another supplier.



**Click vent.** Anodised surface finish. The ventilation outside is fully concealed with a cover section. Free ventilation opening 3000mm<sup>2</sup>.

	<b>VELFAC In</b> 48mm triple glazing			
Free area	3000mm <sup>2</sup>			
	Head	Jamb		
Equivalent free area	2020mm <sup>2</sup>	NA		

## **5. FRAME DIMENSIONS & STRUCTURAL OPENINGS**

The structural opening is the hole in the wall construction into which the window is to be placed. The structural opening is defined by the clear dimension between any components immediately adjacent to the window.

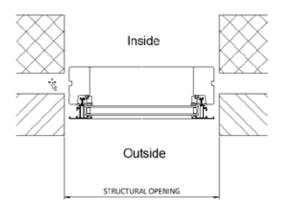
For examples of structural opening dimensions, please refer to the generic interfaces on our web site.

Structural opening sizes are usually determined by one of two means.

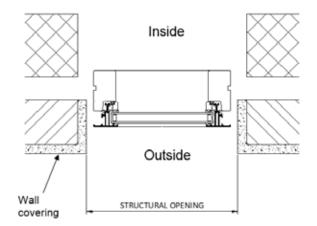
- **a.** If the project is of new construction, the dimensions are normally given on the drawings and plans for the building.
- **b.** If the building is existing, then the existing structural opening would normally be measured to obtain the required dimensions (please refer to section 4.1).

Outside

To arrive at your structural opening, use the clear dimension between the inside faces of your construction as shown on the adjacent diagram.



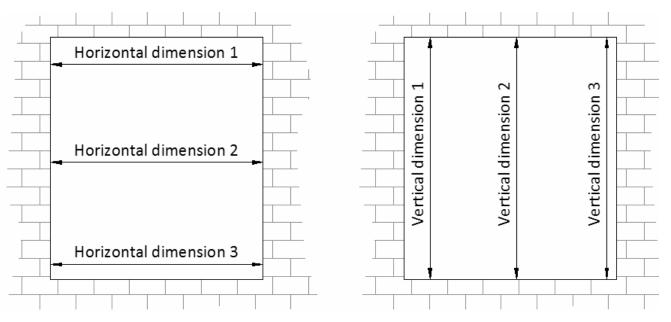
If you are using a wall covering such as render or cladding, then allowance must be made if this extends into the window zone. In these cases your structural opening will be the clear dimension between the inside faces of the wall covering as shown in the adjacent diagram.



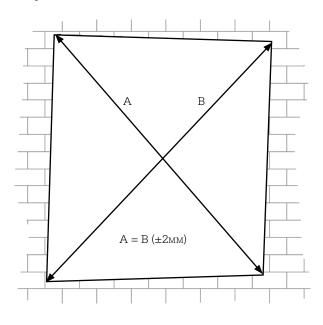


#### 5.1. STRUCTURAL OPENINGS – MEASUREMENT OF EXISTING OPENINGS

If you are measuring existing window openings, it is advisable to take a series of measurements to ensure that the smallest height and width dimensions are identified and to check if your openings are square.



In some cases it may be found that the existing openings are not square or plumb. Check the diagonal dimensions of the opening for square as shown.



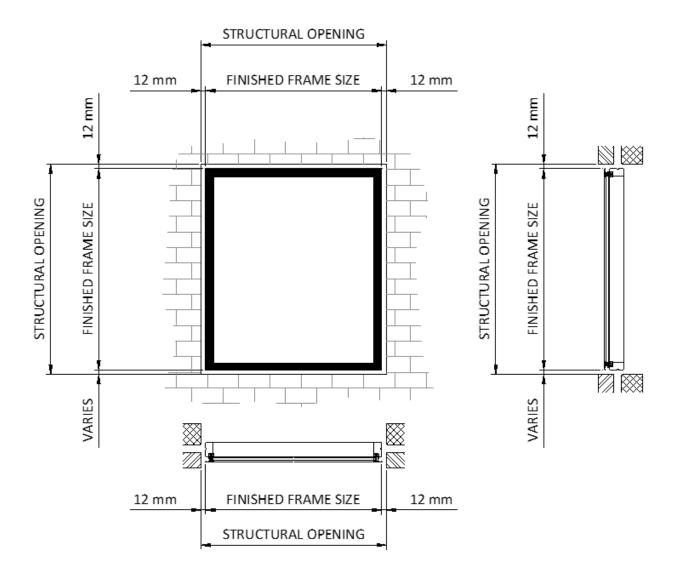
#### 5.2. FINISHED FRAME SIZES – WINDOWS AND DOORS

Once the structural opening dimension has been identified, it is relatively simple to establish the finished frame sizes of the windows or doors. On each side of the window or door a perimeter seal is required.

The perimeter seal dimension is 12mm at the top and sides of the window or door - please see below drawing.

At the bottom of the window or door, the seal dimension varies according to the required detail. It will be 5mm, 8mm, 12mm, 20mm or 30mm depending on the type of structure and/or window cills being required – please refer to illustrations on the following page.

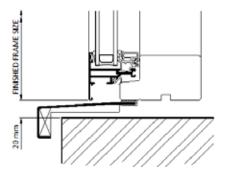
Please visit our web site for typical interface details showing several examples of different arrangements.



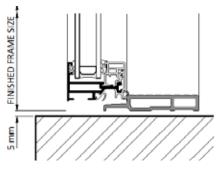
VELFA WINDOWS FOR LIFE

The below details show the bottom of a window or door, and the seal dimension required at each specific case.

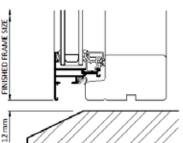
Please visit our web site for typical interface details showing several examples of different arrangements.



Standard window section with aluminium cill pressing = 20mm seal



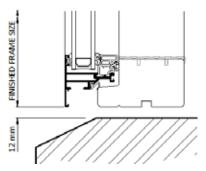
CDO Casement door low threshold = 5 mm seal



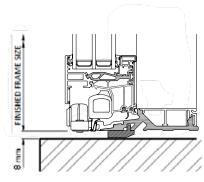
Standard window section without aluminium cill pressing = 12mm seal

FINISHED FRAME SIZE

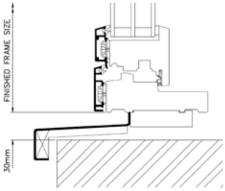
12 mm



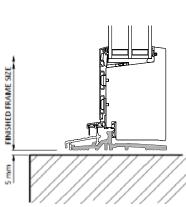
Standard CDO casement door threshold section without aluminium cill pressing = 12mm seal



SCD Sliding casement door with 25mm threshold = 8mm seal



VELFAC In window and Juliette door = 30mm seal



SCD Sliding casement door with 70mm

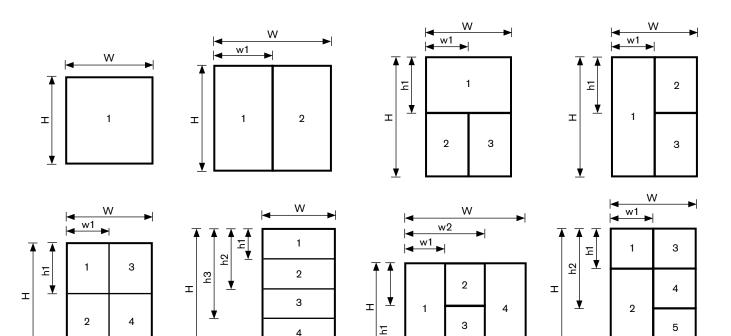
threshold = 12mm seal

VELFAC Ribo door types = 5mm seal

#### 5.3. MULLION & TRANSOM AND POSITIONS

Mullions & transoms are used to subdivide the window. Within the frame different opening functions can be incorporated or different glass and panel types can be inserted.

VELFAC windows can be supplied in many different designs with each pane (or field) having a reference number. When compiling your full and final information, please sketch the required window design and provide the relevant dimensions from the outside of the window frame to the centre line of the mullion/ transom as per the examples below.



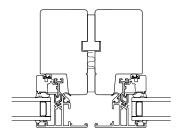
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#### 5.4. COUPLINGS

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If you have large window openings where the windows are to be coupled together, please indicate the complete window and/ or door required and we will make appropriate allowance for the coupling joint.

Also see section 7 of this document for information on coupling joints for windows and doors.







#### **6. ALUMINIUM PRESSINGS**

We are able to supply aluminium window cill and/or door angle trims to weather and finish off the structure below your windows and/or doors.

#### 6.1. WINDOW CILLS AND JULIETTE DOORS

If you require a cill for your windows, the windows will be provided with an attachment profile located along the underside, which the cill pressing is bonded into.

We will need to know the setback dimension as shown in the adjacent diagram which should be stated with your full and final.

We will supply the cills to suit your finished frame sizes +14mm, which will give a nominal joint between the end of the cill pressing and the structure at each end which is sealed with silicone.

Please refer to VELFAC standard interface drawings at www.velfac.co.uk

#### 6.2. CASEMENT AND ACCESS DOORS AND DOOR TRIMS (not RAL colour matched)

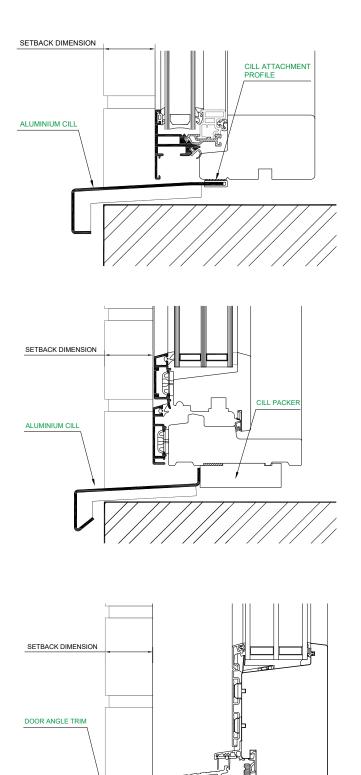
We can supply a silver anodised angle trim below doors to provide a neat finish to the structure and/or a suitable surface for sealing the door frame.

We will need to know the setback dimension as shown in the adjacent diagram which should be with your full and final.

The angle trim will be ordered to suit your finished frame sizes +20mm, which will give a nominal joint between the end of the cill pressing and the structure at each end which is sealed with silicone.

Please refer to VELFAC standard interface drawings at www.velfac.co.uk

**NB:** Cills/trims are only manufactured in one piece up to 3,000mm long. Any cills/trims over 3,000mm will be provided in pieces with a jointing strip.





## 7. WINDOW FIXING LUGS

We are able to supply purpose made window fixing lugs which will provide a fast, stable and durable window installation offering the following benefits:

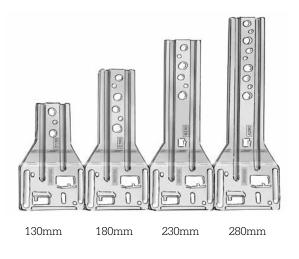
- Reduction of installation time
- Correct placing of lug on frame
- Consistent quality and designed to work with VELFAC V200 windows
- Flexible positioning around frame, simply untwist and move to a new position

**NB:** VELFAC twist-in window fixing lugs are only suitable for use with the VELFAC 200 window system and must not be used with our other window and door systems.



Window fixing lugs are available in 4 different sizes to suit your type of structure and available fixing positions. Please refer to our Installation guide, which gives full details on the use of window fixing lugs, the number of lugs required per window and where they should be placed around the window. The guide is available from www.VELFAC.co.uk and includes a diagram to assist you with choosing the right size of window lug.

Please note, for quotation purposes only, a 230mm lug will have been chosen as all lug costs are the same. Please tick your actual requirements with your full and final information.





# 8. ADDITIONAL INFORMATION FOR VELFAC RIBO ACCESS DOORS

#### 8.1. DOOR TYPES

We can supply doors either as glazed or as a veneered flush door. Flush doors can be supplied with a plain or grooved external finish (the internal finish is plain or horizontal grooved) and are available in several designs, including those that incorporate a range of glass apertures. All doors can be supplied as either single or double leaf (1).





VELFAC Ribo EDO outward opening glazed access door





VELFAC Ribo EDFO outward opening flush access door



VELFAC Ribo EDFI inward opening flush access door

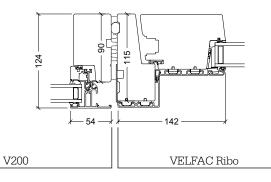
#### Notes:

(1) Further information on VELFAC external doors can be found in our Windows for Life brochure available from our website.

## 8.2. DOOR SIDE AND TOP PANELS

**NB:** If you have large openings where the doors are to be coupled to windows, please indicate the complete assembly required and we will make appropriate allowance for the coupling joint.

A typical example of a frame coupling between a window and door is given below.





#### 8.3. ACCESS DOOR LOCK & HANDLES

Access doors are supplied with a multipoint lock incorporating a single throw deadlock and latch with 2 additional wedge bolts for added security.



The door is locked and unlocked using the cylinder and key supplied and is opened and closed using the internal and external stainless steel lever handles supplied.

**NB:** VELFAC Ribo access doors are the only doors in the VELFAC range that offer external access.

#### 8.4. ACCESS DOOR IRONMONGERY OPTIONS

The following options can be specified when ordering your door. Simply tick those on the door order form that you require. If you need to discuss any options, please do not hesitate to call us.



A spy hole finished in polished brass can be supplied to flush doors.



A letter plate finished in natural anodised aluminium can be supplied. In flush doors it is positioned 716mm above the floor level. SBD letter plate option available.



Locking cylinders are supplied with a key on the outside and a thumbtum on the inside as standard. Cylinders can be supplied with a key operation to both sides if required. If you are ordering more than one door, cylinders will be unique to each door.

#### 8.5. JULIETTE DOOR LOCK & HANDLE

Juliette doors are supplied with an internal espagnolette handle with 3 locking points and a cylinder lock and key. If you are ordering more than one door, cylinders will be unique to each door.



The door is locked and unlocked using the key and cylinder supplied and is opened and closed using the espagnolette handle supplied.

NB: VELFAC Ribo Juliette doors do not offer external access.

#### 8.6. JULIETTE DOOR IRONMONGERY OPTIONS

The following options can be specified when ordering your door. Simply tick those on the door order form that you require. If you need to discuss any options, please do not hesitate to call us.



The inward opening Juliette door is available prepared for an external barrier solution.



Fittings and packers are supplied, but the barrier glazing / external grille should be sourced from another supplier and fitted during installation.

## 9. SBD AND PART Q COMPLIANT PRODUCT RANGE

If you are looking for SBD or Part Q compliant product, VELFAC con offer a wide range. Please see the large pallet of opening functions and element sizes in below table.

Please be aware that:

- Both Part Q and SBD require testing to PAS 24
- SBD requires additional test evidence and yearly factory audits
- Not all Part Q compliant functions are SBD compliant

Platform	Opening function	Part Q compliant	SBD compliant	Max. size (WxH)
VELFAC 200 Alu <sup>(1)</sup>	Sidehung window	~	~	1100 x 2475
	Top-guided window	~	~	1800 x 1500
	Fixed casement	~	~	3275 x 3275
VELFAC 200 ENERGY (1)	Sidehung window	~	~	1100 x 2475
	Top-guided window	~	~	1800 x 1500
	Fixed casement	~	~	3275 x 3275
	Casement window door, 1-leaf with enhanced security	~	~	930 x 2455 <sup>(2)</sup>
	Sliding casement door, 70mm threshold, 1-leaf with enhanced security (there is a minimum height 2070)	~	×	2450 x 2200 (frame) 1221 x 2200 (sash)
	Sliding casement door, 25mm threshold, 1-leaf with enhanced security (there is a minimum height 2070)	~	×	2978 x 2200 (frame) 1485 x 2200 (sash) (1427 x 2200 with 4-4-6.8)
VELFAC Ribo wood/alumi- nium doors	Inward/outward, 1-leaf/2-leaf, flush/glazed entrance door with security lock	~	~	1140 x 2455
	Inward/outward, 1-leaf/2-leaf, patio door with security lock	~	~	1135 x 2435
VELFAC in	Sidehung window	~	×	1300 x 1500
	Turn and tilt window	~	×	1300 x 1500
	Turn and tilt casement door, 1-leaf, tested as a window	~	×	1000 x 2390
VELFAC 500 aluminium door	Inward/Outward, 1-leaf/2-leaf Entrance Door with security lock	~	~	1002 x 2143
Bifold door	Bi-fold Door With Swing Door	~	~	800 x 2700 (per panel)

#### Notes:

- (1) includes fixed shaped elements and panels.
- (2) for clear opening (sizes between  $1100 \times 2000$  and  $800 \times 2475$ ).

(3) Maximum 7 panels.