General Documentation Disclaimer

This manual is intended as a manufacturing and installation advisory document. For correct specifications, sizing of profiles and structural information please consult the Starfront Application. If the information you require is not available through the Starfront Application, please contact your stockist before proceeding. It is advisable to have all sizing and performance criteria checked by a qualified structural engineer to ensure that all performance and compliance will be met.

All information, recommendations or advice contained in this documentation is given in good faith to the best of Wispeco’s Knowledge and is based on current procedures in effect.

Since the actual use of this documentation by the user is beyond the control of Wispeco, such use is within the exclusive responsibility of the user. Wispeco cannot be held responsible for any loss incurred through incorrect or faulty use of this documentation. Training of Wispeco systems is important for ensuring correct procedures in the manufacturing of products.

Great care has been taken to ensure that the information provided is correct.

Ensure that you have the latest available manual. The revision number and date can be checked on the latest Starfront version.

Wispeco will accept no responsibility for any errors and/or omissions, which may have inadvertently occurred.

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Specifications concerning products and applications

This manual is based on standard configurations only. As there are many configurations not covered in this manual, contact your stockist with regard to a configuration not represented herein.

All mechanical joints must be sealed with a CREALCO approved joint sealer. Failure to correctly seal the joints can affect the performance of the system. Information on joint sealing can be found in the Cleaning & Maintenance Manual available for download from the Wispeco website.

All drawings in the Wispeco Documentation are shown NOT to scale and are used for illustrative purposes only. For correct sizing and machining of system profiles refer to the Wispeco Starfront Application.

Wispeco cannot accept responsibility for the use of standard products since Wispeco does not know where these products are being installed.

The hardware recommended in this documentation is suitable for use in most atmospheric environments. When hardware is used in severe coastal environments the manufacturer of the hardware must be consulted.

The use of non-specified hardware or incorrect mechanical fasteners can adversely affect the mechanical and weathering performance of the system and we strongly advise against deviations. A Wispeco Consultant can advise you of any hardware issues and limitations with regard to this system.

The use of anti-magnetic stainless steel screws and aluminium pop rivets is recommended to reduce galvanic corrosion in harsh environments.

Fixing lugs on frames must be positioned as per the user manual and used in accordance to the AAAMSA specifications. When profiles are screwed together the screw centers must also be according to the user manual or as specified by an engineer.

All glass used within Wispeco products must comply with SAGGA regulations. Laminated glass must not stand in water.

By continuing to use this documentation you acknowledge that you understand and accept the legal disclaimer.
1. The Crealco Guardian Barrier System is made up of two assembly components, the Outer Frame (A) and the Sliding Barriers (B).
2. The Stiles (E) and the Fights (F) are affixed using specialised plastic connector blocks.
3. The supplied mechanical hardware -
4. Do not use any other fixing methods or parts not specified in this document as it can lead to the integrity and/or operation of the window being compromised.

NOTE

1. The system is manufactured using 6033 Aluminium. The use of any screws which are not Stainless Steel will result in corrosion of the aluminium. Please ensure that all mechanical fixation to the structure uses the correct materials.
2. Ensure that you follow the instructions correctly on all assembly and fixation. Do not attempt to modify sizes or calculations as this will result in the system failure.
OUTER FRAME PROFILES

GUARDIAN HEAD RAIL

- W35014
- Width: 50mm
- Height: 40mm
- I_x = 10.368
- I_y = 5.074

GUARDIAN JAMB

- W57220
- Width: 36.5mm
- Height: 30mm
- I_x = 2.313
- I_y = 3.466

GUARDIAN TRACK

- W35015
- Width: 32mm
- Height: 9.5mm
- I_x = 0.575
- I_y = 0.107

SLIDING PROFILES

GUARDIAN LOCK STILE

- W57221
- Width: 51mm
- Height: 25mm
- I_x = 2.444
- I_y = 5.606

GUARDIAN MEETING STILE

- W57222
- Width: 57.2mm
- Height: 26mm
- I_x = 3.278
- I_y = 11.970

GUARDIAN STILE

- W57219
- Width: 22mm
- Height: 17mm
- I_x = 1.128
- I_y = 0.517

GUARDIAN FLIGHT

- W35016
- Width: 3.7mm
- Height: 16mm
- I_x = 0.004
- I_y = 0.071
Pack Contains the following items:

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guardian Washer 12x1.5</td>
<td>3</td>
</tr>
<tr>
<td>Guardian Washer 12x3.0</td>
<td>9</td>
</tr>
<tr>
<td>Guardian Washer 12x9.7</td>
<td>6</td>
</tr>
<tr>
<td>Guardian Pin 7x12</td>
<td>6</td>
</tr>
<tr>
<td>Guardian Pin 7x19</td>
<td>6</td>
</tr>
<tr>
<td>Guardian Pin Hex 7x15</td>
<td>3</td>
</tr>
<tr>
<td>Guardian Cap Hex</td>
<td>15</td>
</tr>
<tr>
<td>Guardian Hanger Body</td>
<td>1</td>
</tr>
<tr>
<td>Guardian Hanger Wheel</td>
<td>2</td>
</tr>
<tr>
<td>Guardian Guide Body</td>
<td>1</td>
</tr>
<tr>
<td>Guardian Guide Insert</td>
<td>1</td>
</tr>
<tr>
<td>Guardian Block Sliding</td>
<td>6</td>
</tr>
<tr>
<td>Guardian Block Fixed</td>
<td>6</td>
</tr>
<tr>
<td>Grommet Black 10.5</td>
<td>12</td>
</tr>
<tr>
<td>Self Tapping Screw Pan Head S/S 8x30</td>
<td>6</td>
</tr>
<tr>
<td>Self Tapping Screw Pan Head S/S 8x25</td>
<td>6</td>
</tr>
<tr>
<td>Self Tapping Screw Pan Head S/S 8x13</td>
<td>3</td>
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Packaging per pack GSK-JLSP

<table>
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<tr>
<th>Item</th>
<th>Quantity</th>
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</thead>
<tbody>
<tr>
<td>Guardian Handle - Black</td>
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</tr>
<tr>
<td>Guardian Handle - White</td>
<td>1</td>
</tr>
<tr>
<td>Guardian Lock - Slam</td>
<td>1</td>
</tr>
<tr>
<td>Guardian LOCK - Standard</td>
<td>1</td>
</tr>
</tbody>
</table>

**GUARDIAN HARDWARE KITS (AVAILABLE IN BLACK OR WHITE)**

<table>
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<th>Quantity</th>
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<tr>
<td>Guardian Jamb/Lock Stile Pack Black</td>
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</tr>
<tr>
<td>Guardian Jamb/Lock Stile Pack White</td>
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<tr>
<td>Guardian Pin 7x12</td>
<td>6</td>
</tr>
<tr>
<td>Guardian Pin 7x19</td>
<td>3</td>
</tr>
<tr>
<td>Guardian Cap Hex</td>
<td>9</td>
</tr>
<tr>
<td>Guardian Hanger Body</td>
<td>1</td>
</tr>
<tr>
<td>Guardian Hanger Wheel</td>
<td>2</td>
</tr>
<tr>
<td>Guardian Guide Body</td>
<td>1</td>
</tr>
<tr>
<td>Guardian Guide Insert</td>
<td>1</td>
</tr>
<tr>
<td>Guardian Block Sliding</td>
<td>3</td>
</tr>
<tr>
<td>Guardian Block Fixed</td>
<td>3</td>
</tr>
<tr>
<td>Self Tapping Screw Pan Head S/S 8x30</td>
<td>6</td>
</tr>
<tr>
<td>Self Tapping Screw Pan Head S/S 8x25</td>
<td>6</td>
</tr>
<tr>
<td>Self Tapping Screw Pan Head S/S 8x13</td>
<td>3</td>
</tr>
<tr>
<td>Dome Pop Rivet 4.8x10</td>
<td>1</td>
</tr>
</tbody>
</table>

Packaging per pack GSK-JLSP

<table>
<thead>
<tr>
<th>Item</th>
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<td>1</td>
</tr>
<tr>
<td>Guardian Lock - Slam</td>
<td>1</td>
</tr>
<tr>
<td>Guardian LOCK - Standard</td>
<td>1</td>
</tr>
</tbody>
</table>
Aluminium is a soft metal and can be easily cut with a framing saw or a hacksaw with a miter box. Better quality cutting methods will result in better quality joints.

Use a fine tooth blade or a blade specified for aluminium cutting.

If you are using an electric saw, ensure that you are using an aluminium saw blade.

**NOTE:** Do not cut the profiles with steel cutting methods such as abrasive discs. This will result in the powder coating melting and being permanently damaged.

Always wear eye protection when cutting aluminium as the slivers are sharp and can cause splinters. Always wear gloves when handling glass.

Always wear eye protection when cutting aluminium as slivers of aluminium can seriously damage the eye. Always wear eye protection when handling the glass.
This manual must be read in conjunction with the Installation, Cleaning & Maintenance Document and the Performance Certificates for the relevant system. The manual must also be used in conjunction with the design and cutting list from the latest version of StarFront.

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**BAR CALCULATION**

It is critical to the correct operation of the system to ensure that the correct number of stiles are used in each system. The maximum stiles center to center is MAXIMUM 140mm.

**Sliding Stiles**

\[
\text{Sliding Stiles} = \frac{(\text{Cavity Width} - 75\,\text{mm})}{140}
\]

Round up to the Next Whole number

*Example: 900mm Cavity Example*

\[
\begin{align*}
\text{Sliding Stiles} &= 900\,\text{mm} - 75\,\text{mm} / 140 = 5.98 \\
\text{Sliding Slides} &= 6 \text{ (excludes fixed stile, includes lock stile)} + 1 \text{ fixed stile}
\end{align*}
\]

**Meeting Stile Configuration**

This cutting formula is based on complete machining of the stiles.

\[
\text{Sliding Stiles} = \frac{(\text{Cavity Width} - 64\,\text{mm})}{140\,\text{mm}}
\]

*Example: 2400mm Cavity Example*

\[
\frac{(2400 - 64\,\text{mm})}{140\,\text{mm}} = 16.68
\]

17 Sliding Stiles required

Round up to the next even number

18 Sliding Stiles required
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GUARDIAN SECURITY BARRIER SYSTEM

PRODUCT MANUAL

GUARDIAN STILE

MACHINING DETAILS

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Stile Flight Mechanism Machining
Guardian stile hardware mechanism machining is critical to the correct operation of the Guardian Barrier System. Please ensure that machining of the stile hardware is accurate and that the slots are completely deburred and free of any debris.

Stile Cutting Guide
This cutting formula is based on complete machining of the stiles. Pre-machined stiles are available for purchase in which case, please follow section under pre-machined stile machining.

Cut Length = (Cavity Height) - (28mm Top) - (23mm Bottom)

ALL Flights are to be measured from the TOP of the Stile

Flight Mechanism Cutting Guide
All Flight Machining must follow the supplied cutting diagram

Sliding Mechanism = 65mm(including radius ends) x 7mm

Fixed Mechanism = 135mm from the BOTTOM of the Sliding Mechanism

Pre-machined Stiles
Pre-machined stiles have been produced to ONLY be shorted from the BOTTOM.

Cut Length = (Cavity Height) - (28mm Top) - (23mm Bottom)

ONLY the BOTTOM Size needs to be trimmed
GUARDIAN SECURITY BARRIER SYSTEM

PRODUCT MANUAL

GUARDIAN
SECURITY BARRIER SYSTEM

MACHINING DETAILS

GUARDIAN LOCK STILE

Flight Mechanism

23mm Rail Gap

Lock Machining

28mm Head Gap

Flight Mechanism

TOP OF CAVITY

FLOOR

Flight Mechanism

23mm Rail Gap

Lock Stile Cutting Guide

This cutting formula is based on complete machining of the stiles. Pre-machined stiles are available for purchase in which case, please follow section under pre-machined stile machining.

Cut Length = (Cavity Height) - (28mm Top) - (23mm Bottom)

ALL Flights are to be measured from the TOP of the Stile

Lock Cutting Guide

Stile Flight Mechanism Machining

Guardian stile hardware mechanism machining is critical to the correct operation of the Guardian Barrier System. Please ensure that machining of the stile hardware is accurate and that the slots are completely deburred and free of any debris.

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Stile Flight Mechanism Machining
Guardian stile hardware mechanism machining is critical to the correct operation of the Guardian Barrier System. Please ensure that machining of the stile hardware is accurate and that the slots are completely deburred and free of any debris.

Lock Jamb Cutting Guide
This cutting formula is based on complete machining of the stiles. The Jamb is cut to the same length as the stiles.

\[ \text{Cut Length} = (\text{Cavity Height}) - (28\text{mm Top}) - (23\text{mm Bottom}) \]

ALL Flights are to be measured from the TOP of the Stile.
Flight Cutting Guide

The Guardian Flight must always be cut as per supplied diagram. Sizes have been accurately defined based on the strength of the profiles and hardware. Changing any dimensions will result in poor system performance.
The Guardian Barrier System is made up of 2 main components, the fixed components (Head, Rail and Jamb) and the Sliding Assemblies.

1. The first stile on the Sliding Assembly is fixed to the wall and is called the Fixed Stile.
2. Meeting Stile configuration does not use a jamb.

**MAIN COMPONENTS**

1. Head Rail
2. Track
3. Jamb
4. Standard Sliding Arrangement
5. Meeting Stile Sliding Arrangement
SLIDING COMPONENTS

OVERVIEW

1. The Standard Sliding Assembly is made up of 3 aluminium extrusions, the stiles, the lock stile and the flights.
STILE COMPONENTS

Stile Components

Each Stile must be fully assembled and checked before installing and affixing. The correct Procedure for installing the hardware components is as follows.

1. Insert the sliding Block for the Middle first by inserting it from the top or bottom. Do the same for the Fixed Block. Affix the slider in place with the pin and by attaching the flights and washers.

2. Insert the sliding Block for the Bottom by inserting it from the bottom. Then insert the fixed Block. Affix the slider in place with the pin and by attaching the flights and washers.

3. Insert the Fixed Block for the Top by inserting it from the top. Then insert the Sliding Block. Affix the slider in place with the pin and by attaching the flights and washers.

4. Insert the Hanger Body into the top of the stile. Affix the hanger block in place with a x screw.

5. Insert the Track Guide Insert into the bottom of the stile. Insert the Track Guide into the Track Guide Insert.

The Stiles are always measured and processed from the top to the bottom (ie, all measurements will start from the top and all cutting or fitting will be done at the bottom. Any minor discrepancies can be compensated by the Guide Rail Assembly. Any issues at the top of the stile will cause misalignment to the flights causing the barrier to perform poorly.
If the base and head are quite level and the sides perpendicular then the opening will be square, you can check this however by measuring diagonally from corner to corner, our drawings shows that if A and B are the same then the opening is square.

Drill all fixing holes for both items according to the anchoring guidelines (see page x)

Ensure all fixation holes have been properly machined prior to assembling the sliding components.
Connect two Flights together using the Supplied kit. First insert the 7 x 12 Hex Pin (FSG-P7X12) into the rear flight. Insert a 3mm washer (FSG-W12X3) between the 2 flights. Insert a 1.5mm washer on the front flight and screw in with the No. 8 x 16mm screw. Close off with the Hex Cap.

Insert the Center Sliding Block into the stile. Use a push rod to move it into place. The blocks can be fixed to the Preassembled flights once they are aligned and in place. Do not overtighten the screws.

Connect all stiles to each other. Note: The fixed stile and the lock stile have a different pin configuration to the standard sliding stiles. Please check to ensure that they are correctly configured.

First inserting the Hanger Body into the top of the stiles (including the lock stile). Drill through the 3.3 Ø hole into the Body and affix with No. 8 x 13 Pan Head Screw. Insert Wheels to Body.

Ensure the stile is deburred and free on any debris. Insert the Rail Guide Body into the bottom of the stiles (including the lock stile). Insert the Rail Guide Insert into the Body and ensure it moves freely.

Assemble the top outer frame profile with the corner connector to the final assembly. Affix with screws.
SYSTEM ASSEMBLY

FINiAL ASSEMBLY

ASSEMBLY SEQUENCE

This manual must be read in conjunction with the Installation, Cleaning & Maintenance Document and the Performance Certificates for the relevant system. The manual must also be used in conjunction with the design and cutting list from the latest version of StarFront.

1 INSERT SLIDING ASSEMBLY INTO HEAD AND TRACK

Position the Barrier within the cavity and align the Head and Track.
Mark all positions and remove from cavity
Drill all holes. Note: do not drill holes with the barrier in position as falling debris can inhibit the sliding mechanism.
Insert Barrier and affix all outer anchors (Position 1)

Position 1

Position 2

Position 3

Complete all anchoring in position 3, the sliding mechanism should move freely within the cavity.

Position 4

Position 5

Position 6

Move the Sliding Assembly to position 6 and drill the holes for the fixed stile.
Note: Ensure that the best anchors are used for the fixed stile as it is the highest load area on the system.
Affix the anchors

Position 7

Open the barrier to Position 5 and markup the fixed stile anchors

2 FITTING OF HEAD AND TRACK

3 FITTING THE FIXED STILE

Place the Jamb against the wall and align it with the Sliding Assembly.
Open the Sliding Mechanism and drill all holes for the jamb.
Affix the Jamb to the Wall and close all holes with the 10mm Grommits.

Check that all components fit correctly and slide freely before continuing with the installation.

3 FITTING THE JAMB

Align Jamb

Drill and Anchor

Final Assembly

Assemble all components and check that they fit correctly and slide freely.

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SYSTEM INSTALLATION

ANCHORING

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