

DEFENDER

SOLUTIONS FOR GLASS PARAPETS



VESNA INC

WHERE BEAUTY
MEETS SAFETY.

AN AUTHORISED CHANNEL PARTNER OF SAINT GOBAIN









VESNA INC

AN AUTHORISED CHANNEL PARTNER OF SAINT GOBAIN

WHAT ARE PARAPETS?

Glass parapets are elegant, waist-high safety barriers, which enliven the beauty and safety of spaces. They not only protect people from the risk of slipping off balconies and staircases, but also enhance the aesthetics and acoustic comfort of spaces.

SMART REASONS TO CHOOSE A GLASS PARAPET.

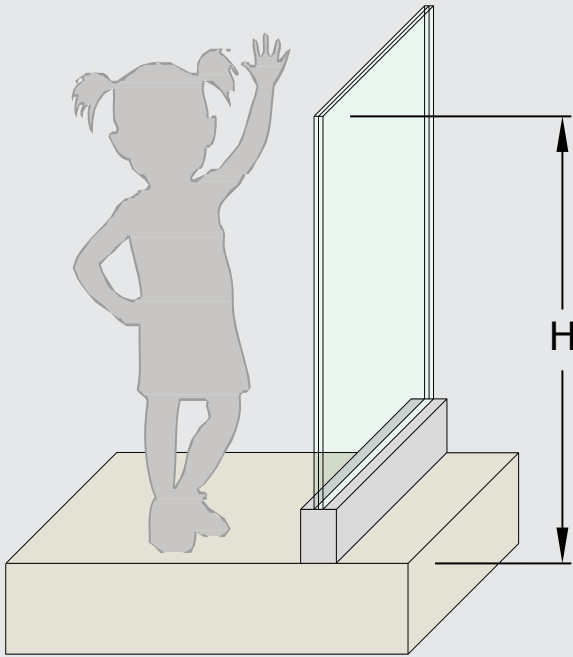
-  Ushers in aesthetics and safety.
-  Enhances acoustic comfort.
-  Increases walking space.
-  Prevents climbing over and falling.
-  Facilitates fitting with aesthetic or functional handrail.
-  Allows combination with highly impressive lighting solutions.



VESNA INC

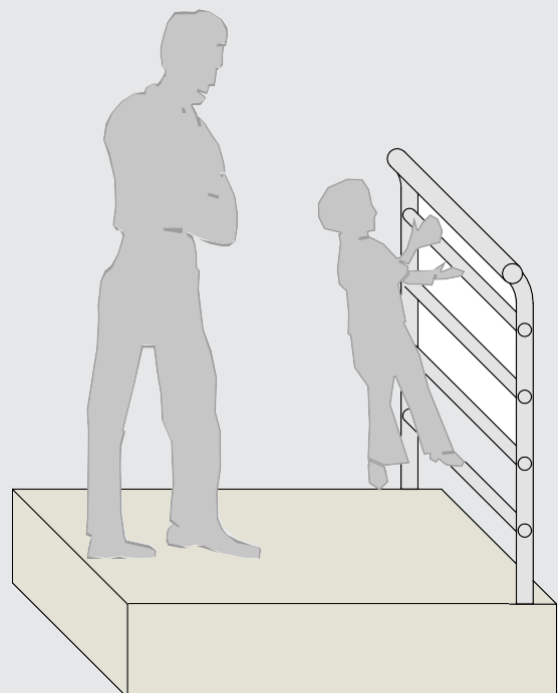
AN AUTHORISED CHANNEL PARTNER OF SAINT GOBAIN

GLASS PARAPETS – ENSURING SAFETY.



The safety requirements of parapets contain regulatory provisions in terms of dimensions, starting with a minimum protective height of 100 cm. Based on local provisions, or specific situations, this can go up to 110 cm, or at times, even 120 cm. In staircases, the protective height is measured starting from the external corner of the tread, with a minimum height of 90 cm.

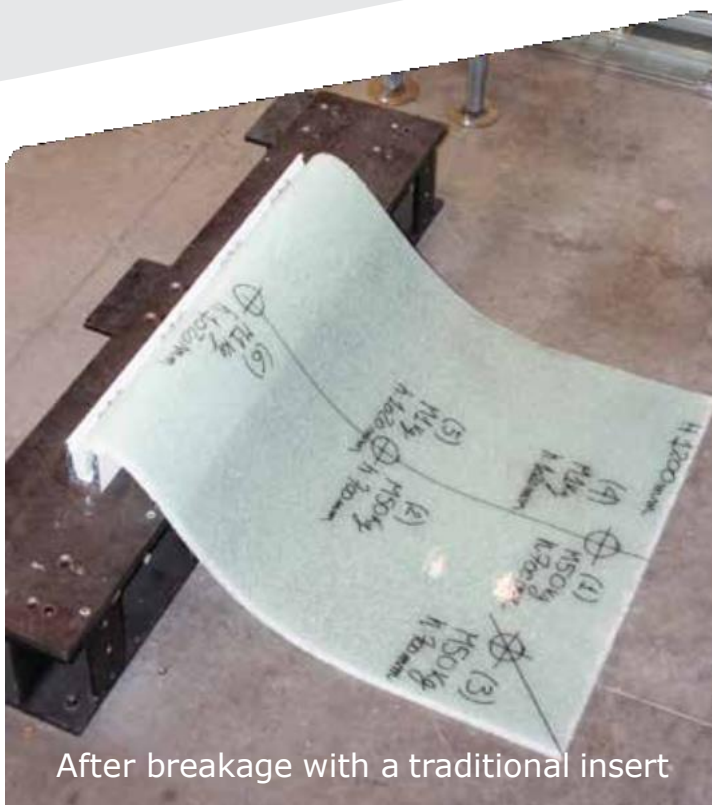
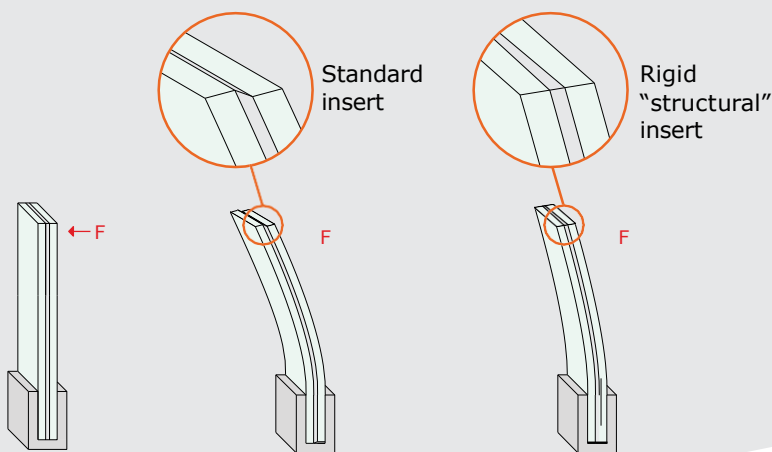
Caution: The height should be calculated from the first usable surface, which is not necessarily the same as the height from the finished floor. Hence, it is vital to identify any precarious or stable walking surfaces near the protective barrier; they are generally 5-30 cms wide. In case there are large steps or fixed walkable elements just before the parapet, the necessary height has to be increased, compared to more standard situations.



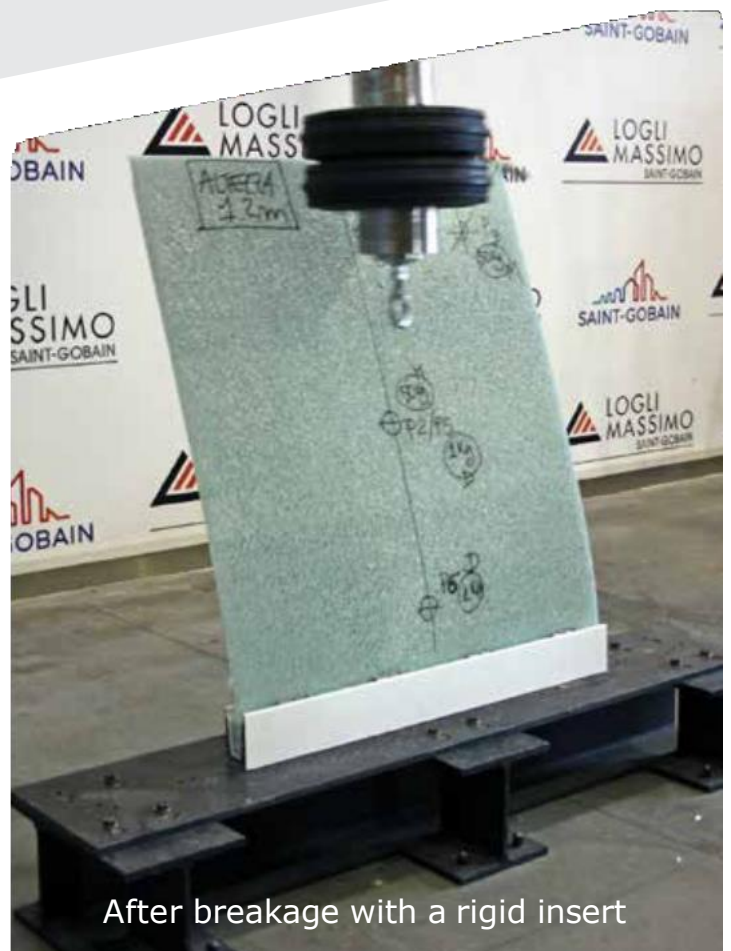
WHY LAMINATED SAFETY GLASS FOR PARAPETS?

For glass parapets, many European regulations prescribe using laminated safety glass defined by standard ISO 12543 and classified 1B1 according to standard EN 12600. This is because, in case of breakage, the insert (often called "plastic") can withhold the glass fragments, limit the dimensions of the opening, offer residual resistance and reduce the risk of injuries.

In laminated glass, the use of a rigid insert (often called "structural") allows to obtain better performance and a higher degree of safety. During normal function, the enhanced rigidity allows the glass panels to collaborate more effectively with better performance in terms of resistance and deformation. Moreover, the greater rigidity allows the panel to maintain its original shape even when damaged, until it is replaced.



After breakage with a traditional insert



After breakage with a rigid insert

SAFETY COMPLIANCE.

A glass parapet can be declared compliant with regulatory requirements directly by the installer, who will issue a "Professional Installation Declaration", accepting responsibility for correct assembly and supplies of materials compliant with the technical specifications of the state-qualified designer, who defines and signs the project-related decisions as consistent with said requirements. A system provided with test reports or calculation reports is capable of meeting the needs of both designers and installers, who make use of the documents by enclosing them in the project or construction site folder.

On-site testing, when necessary and required, is useful to verify the details described in the test report or in the calculation reports.



VESNA INC

AN AUTHORISED CHANNEL PARTNER OF SAINT GOBAIN

GUARANTEE OF SAFETY & RELIABILITY.

Saint-Gobain has been at the front line for the evaluation and inspection of parapet performance.



Meets extremely challenging situations head-on!

The DEFENDER collection has been tested up to a maximum stress of 18,0 kN/m

DEFENDER COLLECTION

UNMATCHED SAFETY. AESTHETIC DESIGN.
EASY INSTALLATION.

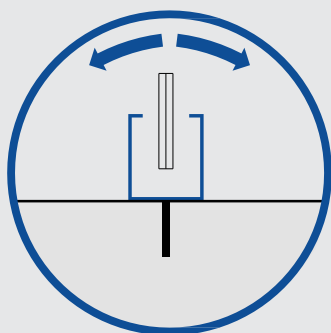
Views the complete collection designed to meet every need.
Choose where to install your parapet, and we will provide
the tools to implement the project.



VESNA INC

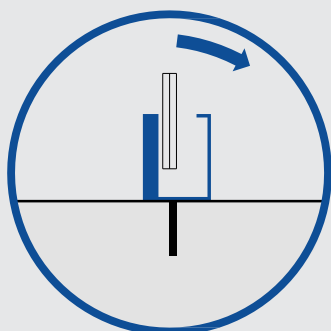
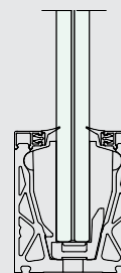
AN AUTHORISED CHANNEL PARTNER OF SAINT GOBAIN

DEFENDER COLLECTION FOR EVERY NEED



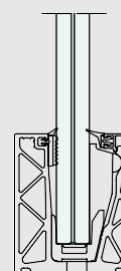
DEFENDER **XP** Small and adjustable

- ⚙ only 62 x 75 mm
- ⚙ glass 6+6, or 8+8
- ⚙ Rapid installation
- ⚙ adjustable on two sides
- ⚙ $\pm 2^\circ$



DEFENDER **PICO** Small and resistant

- ⚙ only 62 x 75 mm
- ⚙ glass 6+6, or 8+8
- ⚙ Rapid installation
- ⚙ single side



DEFENDER **XP** System for Small & Strong and **PICO** system for Residential



**SMALL &
STRONG**

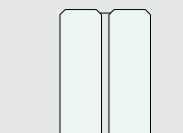
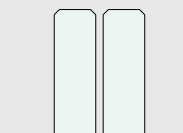


RESIDENTIAL

Glass Thickness

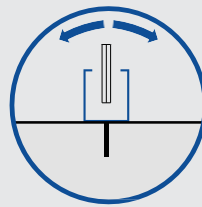
66 (13.52 mm)

88 (17.52 mm)

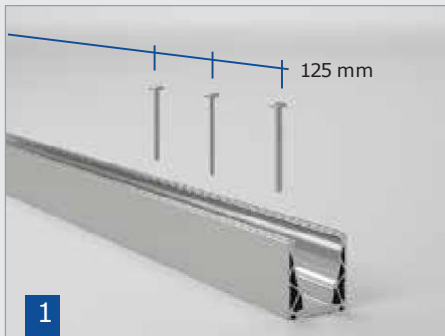


DEFENDER- INSTALLATIONS

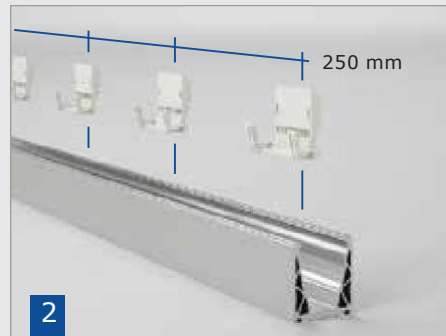
Adjustable, rapid and effective Installation >>>



DEFENDER XP



1 Place the pre-drilled profile on the support and secure it with suitable anchors for the type of structure.



2 Place the basic cradles with clamps at the bottom of the groove (for LED installation, during this phase, remove the connectors on the cradles and place the LED strip).



3 Place the glass pane in the profile; the pane will remain in place, once it has been inserted.



4 Insert the pressure contrast system, and then the interface rollers.



5 Adjust and tighten the pressing device to secure the glass pane (3 Nm lock recommended).



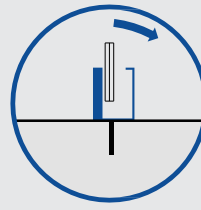
6 Complete the process with internal and external snap on finish profiles after pre-installing the lip gasket.

New patented system for anchoring the glass pane and adjusting its alignment $\pm 2^\circ$.

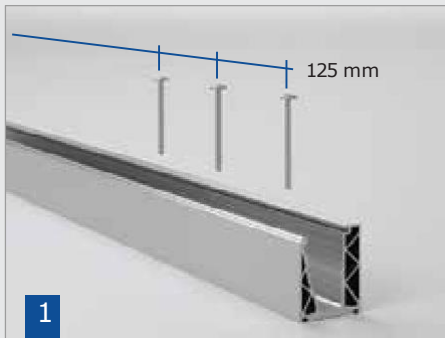


DEFENDER- INSTALLATIONS

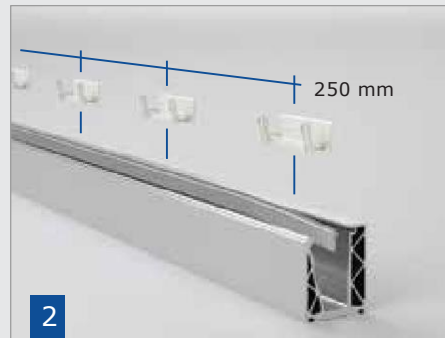
Easy, rapid and single side Installation >>>



DEFENDER PICO



1 Place the pre-drilled profile on the support and secure it with suitable anchors for the type of structure.



2 Place the basic cradles at the bottom of the groove and the external seal (for LED installation, during this phase, remove the connectors on the cradles and place the LED strip).



3 Place the glass pane in the profile; the pane will remain in place, once it has been inserted.



4 Insert the pressure contrast system, and then the interface rollers.

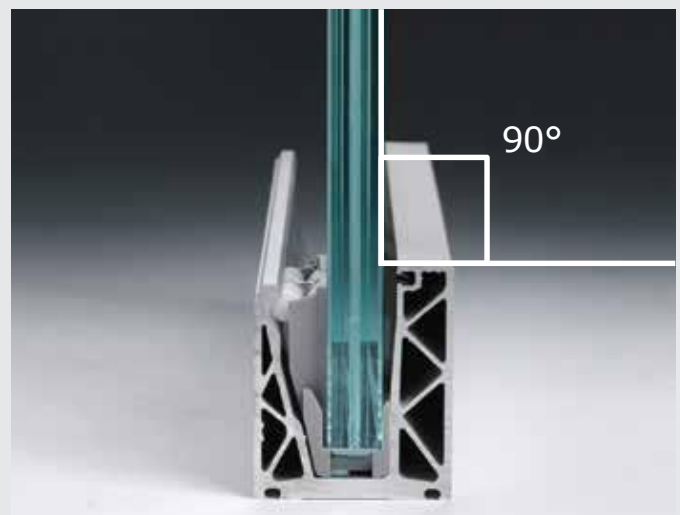


5 Tighten the pressing device to secure the glass pane (2 Nm lock recommended).



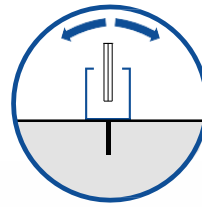
6 Complete the process with the snap on finish profile after pre-installing the lip gasket

New patented system for simple, rapid and single side installation of glass panes.





**SMALL &
STRONG**



DEFENDER XP

DEFENDER XP

- 1. DF66XPKIT / DF15XPKIT / DF88XPKIT

OPTIONAL

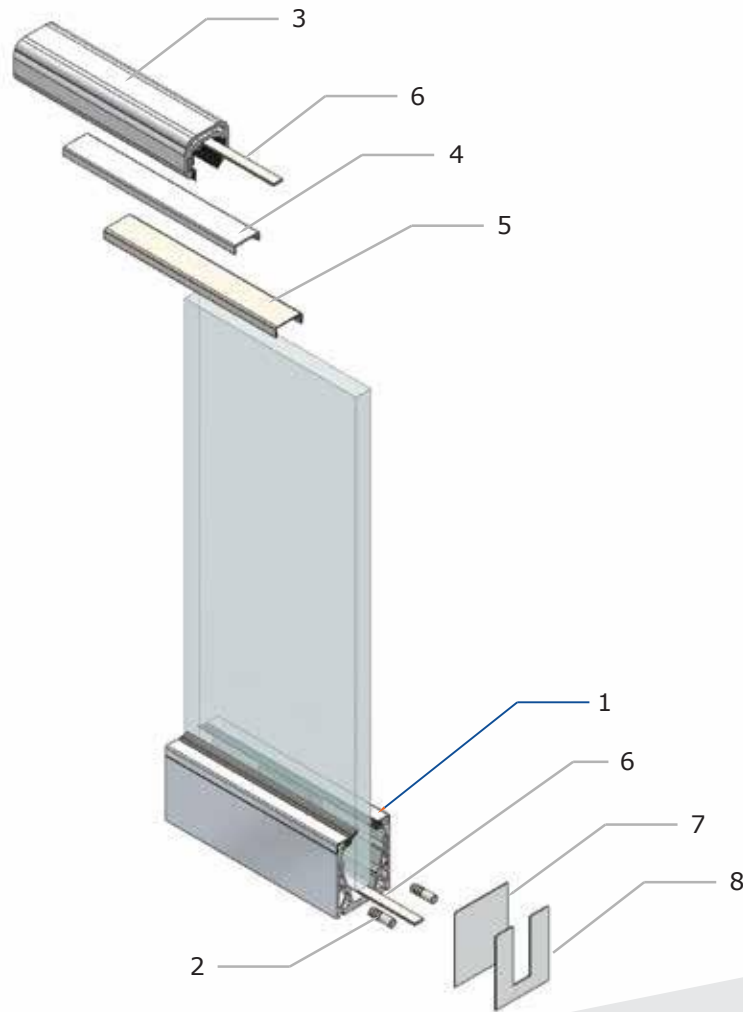
- 2. DF25
- 3. CORLM17
- 4. CPRAL66 / CPRAL88
- 5. CPR66 / CPR88
- 6. LED (SEE APPLICATION)
- 7. DFP7562
- 8. DFP7562U

LED:

OUTDOOR application
LED5050RGB66
LED505066
LED352866

INDOOR application
LED5050RGB
LED5005
LED3528
LED2835CCT
LED2835

See pages
00,00,00



NOTE: INTERNATIONAL TECHNICAL APPROVALS AND VALIDATION
to be verified for glass type and installation specifications: See pages 00, 00



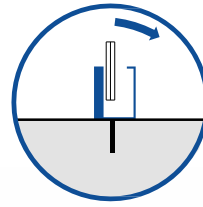
FLOOR ANCHORING
indoor installation



ANCHORING ON RAISED WALL
outdoor installation



**SMALL &
STRONG**



DEFENDER PICO

DEFENDER PICO

- 1. DF66PICOKIT / DF15PICOKIT / DF88PICOKIT

OPTIONAL

- 2. DF25
- 3. CORLM17
- 4. CPRAL66 / CPRAL88
- 5. CPR66 / CPR88
- 6. LED (SEE APPLICATION)
- 7. DFP7562
- 8. DFP7562U

LED:

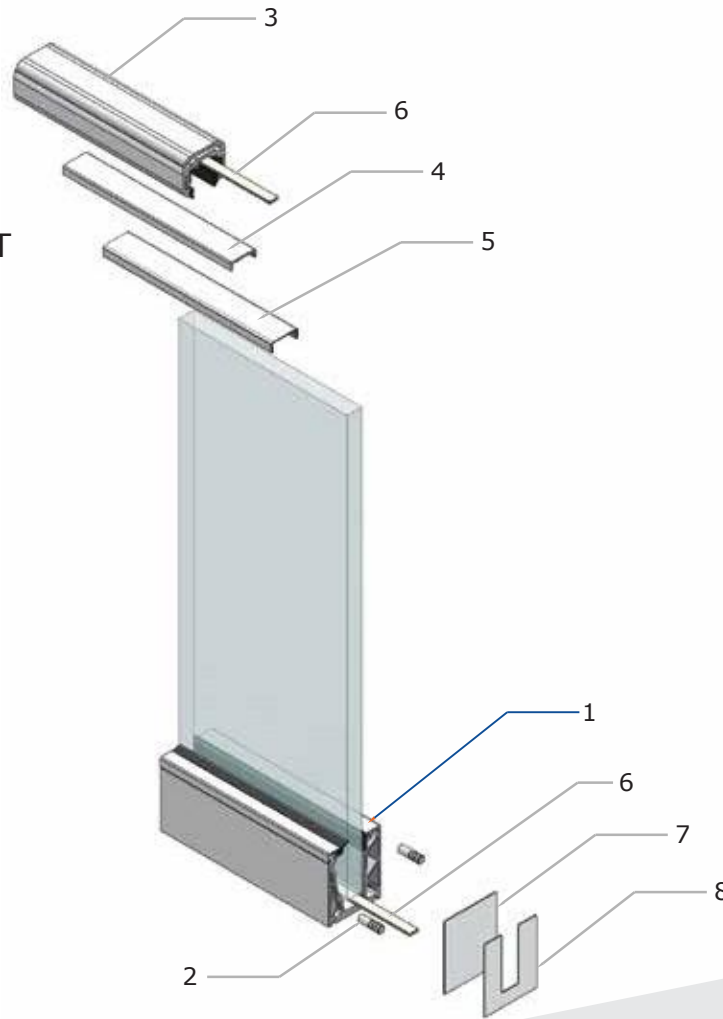
OUTDOOR application

- LED5050RGB66
- LED505066
- LED352866

INDOOR application

- LED5050RGB
- LED5005
- LED3528
- LED2835CCT
- LED2835

See pages
00,00,00



NOTE: INTERNATIONAL TECHNICAL APPROVALS AND VALIDATION
to be verified for glass type and installation specifications: See pages 00, 00



ANCHORING ON RAISED WALL
outdoor installation



FLOOR ANCHORING
indoor installation

STAINLESS STEEL SPIGOT GLASS SYSTEMS



VESNA INC

AN AUTHORISED CHANNEL PARTNER OF SAINT GOBAIN

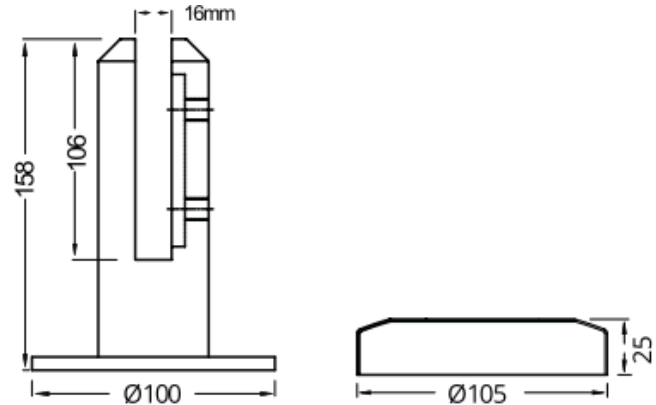
ROUND SPIGOT FOR GLASS SYSTEM 050 - AISI 304/3 16

Features: Glass holder with base Ø100 mm with 3 holes, 09.8 mm each for ground anchoring. When the 2 M10 grub screws are in screwed into place, they press against a steel plate, which in turn will lock the glass pane in place. A gasket to cover the locking plate is provided. It must be used when thicknesses other than the maximum one is used. Plate thickness plus seals is 6 mm.

Comes complete with hole cover. Finish: polished steel, brushed steel



Fixing plate cover gasket



Dimensions
SP 0100/50mm H 158 mm - distance
from ground 52 mm 13.5 mm

For glass panes
13.5 mm

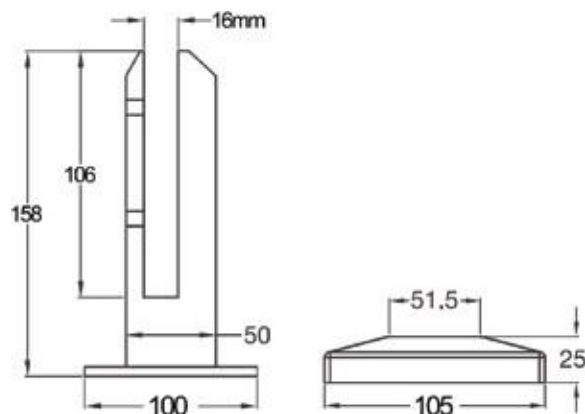
SQ SPIGOT GLASS SYSTEM - AISI 304/316

Features: glass holder with 105x105 mm base, 4 09.8 mm holes for anchoring and adjustment on the ground. When the 2 M10 grub screws are screwed into place, they will press against a steel plate, which in turn will lock the glass pane in place. A gasket to cover the locking plate is provided. It must be used when thicknesses other than the maximum one is used. Comes complete with hole cover.

Finish: polished steel, brushed steel



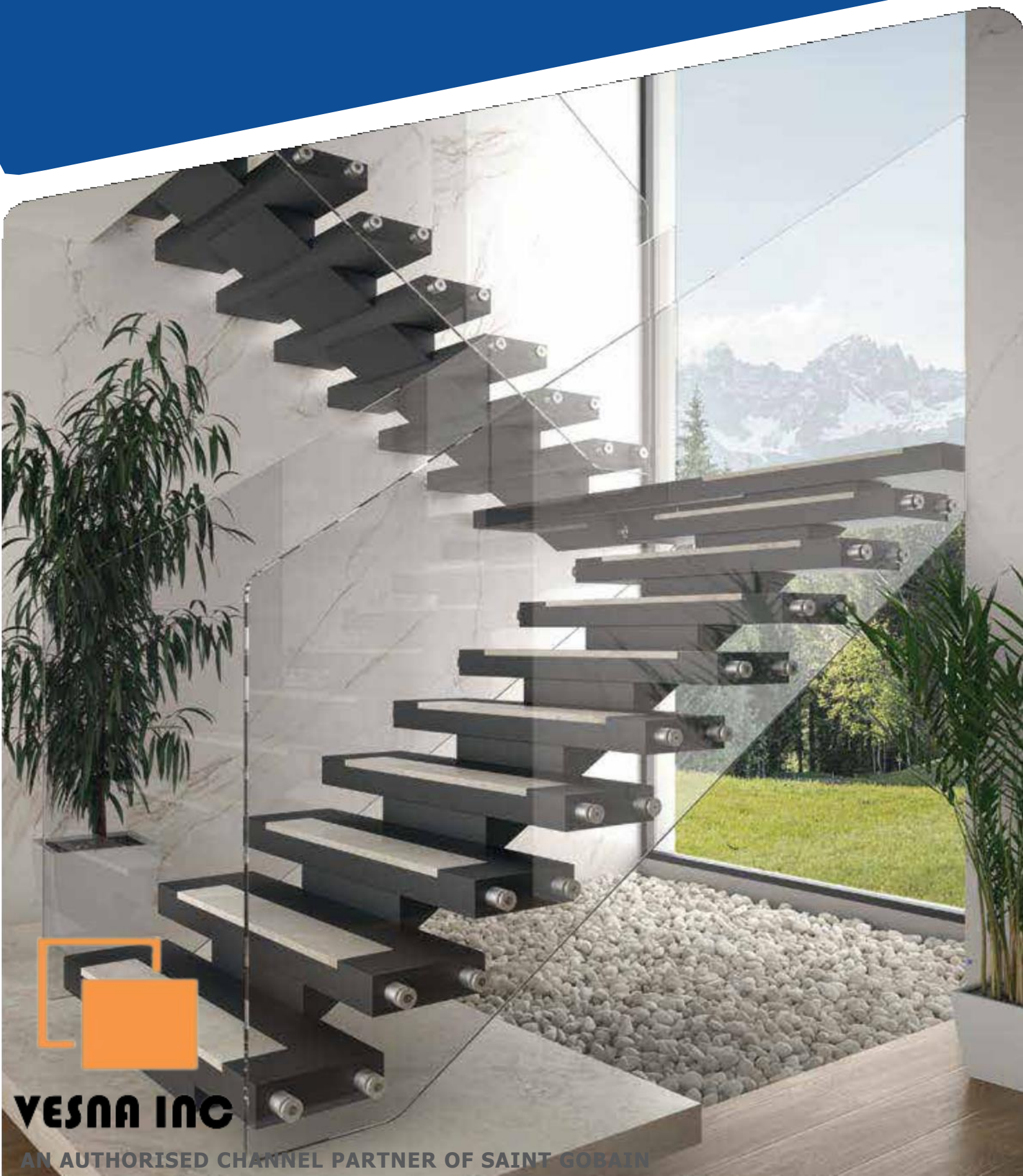
Fixing plate cover gasket



Dimensions
SP 0100/50mm H 158 mm - distance
from ground 52 mm

For glass panes
13.5 mm

POINT FIXINGS FOR BALUSTRADES WITH ADJUSTABLE SPACE.



VESNA INC

AN AUTHORISED CHANNEL PARTNER OF SAINT GOBAIN

ADJUSTABLE POINT FIXINGS – GLASS BALUSTRADE SYSTEMS.

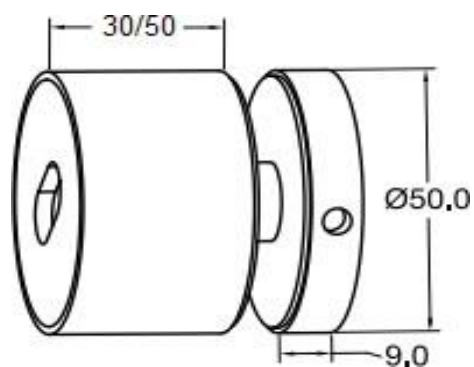


ADJUSTABLE POINT FIXING – AISI 304/316

Features: cast body with honeycomb to lighten the piece.

Screw: machining from bar stock with a blind hole in the head of 04 mm thickness to be screwed to the body by means of a special hook wrench. Anchoring to the wall will be done with an M10 threaded bar.

Finish: o5+eel, brushed steel



Dimensions	Glass thickness	Min glass hole
50mm H 30 mm	13.52 / 17.5 mm	Ø15 mm
Ø50 mm H 50mm	13.52 / 17.5 mm	Ø15 mm

HANDRAILS THAT SPELL CLASS



VESNA INC

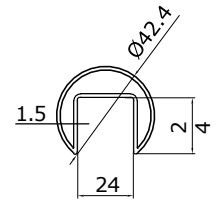
AN AUTHORISED CHANNEL PARTNER OF VESNA INC. CONTACT US AT 00353 1 454 5000

DEFENDER-® SLOT HANDRAIL / ROUND HANDRAIL & ACCESSORIES



SLOT HANDRAIL AISI 304/316

Material: Stainless steel
 Features: Solt round Handrail, with 24x24
 Slot thk 1.5mm.
 Finish: Brushed stainless steel



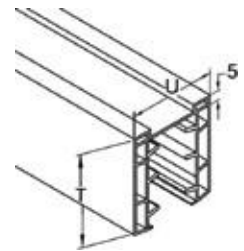
Dimension
 Ø42.4 x L 3000 mm - Th. 1.5 mm 1Mtr



GASKET FOR GLASS EDGE

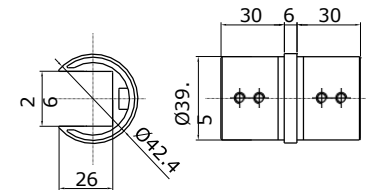
Material: EPDM
 Colour: Black

For glass Q.ty
 13.52 mm Per m
 17.52 mm Per m



ALIGNED JOINT FOR SLOT HANDRAIL

Material: Stainless steel AISI 304/316
 Features: Linear joint for fush handrail
 Finish: Brushed stainless steel

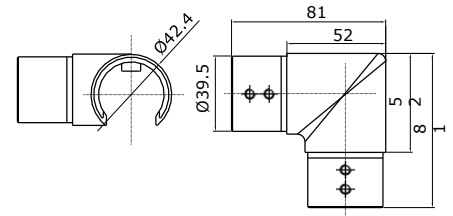


Dimensions
 Ø42.4 x 6 mm 1Pc



90° JOINT FOR SLOT HANDRAIL

Material: Stainless steel AISI 304/316
 Features: 90°corner joint
 for flush handrail.
 Finish: Brushed stainless steel

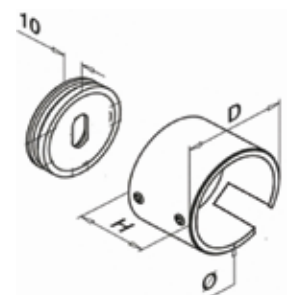


Dimensions
 Ø42.4 x 52 mm 1Pc



START FROM WALL FOR TUBULAR HANDRAIL AISI 304/316

Material: Stainless steel
 Features: Start for tubular
 handrail anchored to the wall.
 Finish: Brushed stainless steel



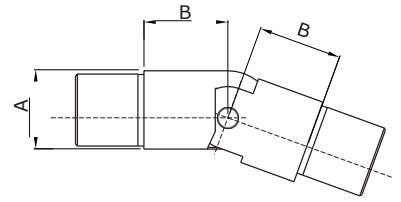
Dimensions
 CORF-WBUT42 A Ø42.4 - B 30 mm 1Pc

DEFENDER-® SLOT HANDRAIL / ROUND HANDRAIL & ACCESSORIES



DOWNWARD ADJUSTABLE CONNECTOR AISI 316

Material: Stainless steel AISI 316
Features: Joint for DESCENDING inclination change with corner that can be registered at 25° - 55° for flush handrail.
Finish: Brushed stainless steel

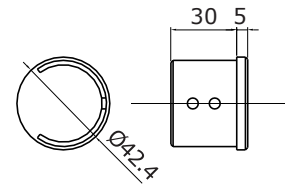


Dimensions
A Ø42.4 - B 30 mm



END CAP FOR SLOT HANDRAIL AISI 316

Material: Stainless steel AISI 316
Finish: Brushed stainless steel

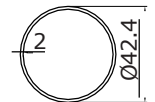


Dimensions
Ø42.4 x L 5 mm



ROUND TUBE FOR HANDRAIL AISI 316

Material: Stainless steel AISI 316
Features: Round tube thickness 2 mm
Finish: Brushed stainless steel

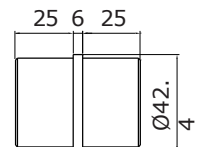


Dimensions
Ø42.4 x L 3000 mm - Th. 2 mm



ALIGNED JOINT FOR TUBULAR HANDRAIL AISI 316

Material: Stainless steel AISI 316
Features: Linear joint for round tubular handrail.
Finish: Brushed stainless steel

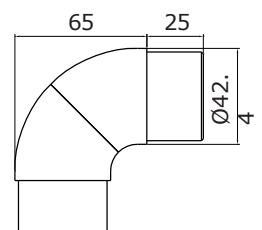


Dimensions
Ø42.4 x 5 mm



ADJUSTABLE CURVE FOR TUBULAR HANDRAIL AISI 316

Material: Stainless steel AISI 316
Features: Adjustable curve for round tubular handrail.
Internal locking screws supplied
Finish: Brushed stainless steel



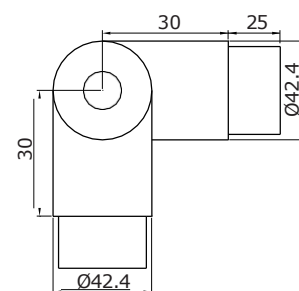
Dimensions
Ø42.4 x 65 mm

DEFENDER-® SLOT HANDRAIL / ROUND HANDRAIL & ACCESSORIES



CORNER JOINT FOR TUBULAR HANDRAIL AISI 316

Material: Stainless steel AISI 316
 Features: Corner joint for change of direction. locked in place with supplied screw
 Finish: Brushed stainless steel

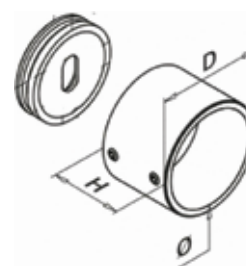


Dimensions
 Ø42.4 x 30 mm



START FROM WALL FOR TUBULAR HANDRAIL AISI 304/316

Material: Stainless steel AISI 304/316
 Features: Start for tubular handrail anchored to the wall
 Finish: Brushed stainless steel

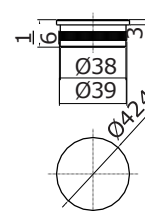


Dimensions
 Ø38.1mm x Ø50.8 mm



END CAP FOR TUBULAR HANDRAIL AISI 316

Material: Stainless steel AISI 316
 Features: Closure tube for tubular handrail
 Finish: Brushed stainless steel

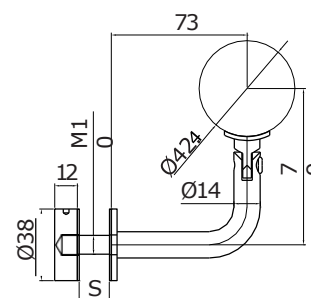


Dimensions
 Ø42.4 mm x 16 mm



ARTICULATED GLASS FITTING FOR TUBULAR HANDRAIL AISI 316

Material: Stainless steel AISI 316
 Features: Articulated support for handrail with connection to glass
 Finish: Brushed Stainless steel

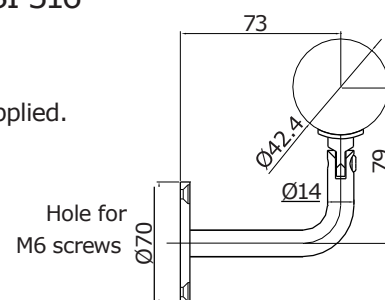


Tube dimensions	Rec. hole glass	For glass
Ø42.4 mm	Ø15 mm	S = 13.52 / 25.52 mm



ARTICULATED WALL FITTING FOR TUBULAR HANDRAIL AISI 316

Material: Stainless steel AISI 316
 Features: Articulated support for handrail anchored to the wall with 2 screws not supplied.
 Finish: Brushed Stainless steel



Tube dimensions
 Ø42.4 mm

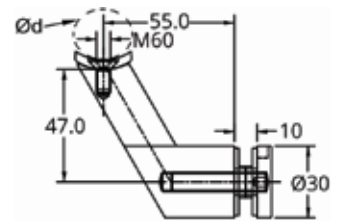
DEFENDER-® SLOT HANDRAIL / ROUND HANDRAIL & ACCESSORIES



ARTICULATED GLASS FITTING FOR TUBULAR HANDRAIL AISI 304/316

Material: Stainless steel AISI 304/316
 Features: Articulated support for handrail with connection to glass
 Finish: Brushed Stainless steel

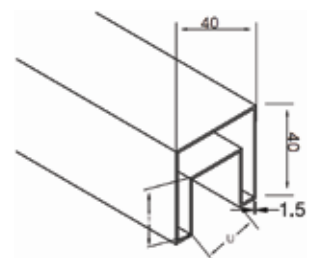
Tube dimensions	Rec. hole glass	For glass
Ø38.1 mm	Ø15mm	13.52 / 17.52 mm
Ø50.8 mm	Ø15mm	13.52 / 17.52 mm



SLOT SQ HANDRAIL AISI 304/316

Material: Stainless steel AISI 304/316
 Features: Slot square Handrail, with 24x24 notch thk 1.5mm
 Finish: Brushed Stainless steel

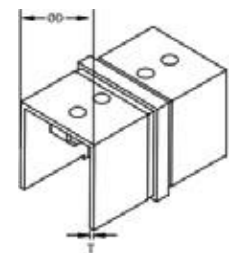
Dimensions
 SQ 40 x 40 x L 3000 - Th. 1.5 mm



IN-LINE JOINT FOR SQ SLOT HANDRAIL AISI 304/316

Material: AISI 304/316 Stainless steel
 Features: Linear joint for sq slot handrail.
 Finish: Brushed steel

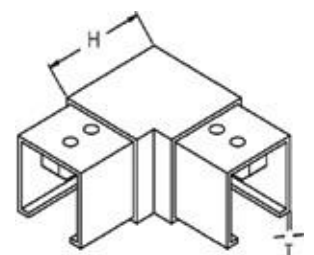
Dimensions
 SQ 40 x 6 mm



90° JOINT FOR SQ SLOT HANDRAIL AISI 304/316

Material: AISI 304/316 Stainless steel
 Features: 90° angle joint for slot handrail.
 Finish: Brushed steel

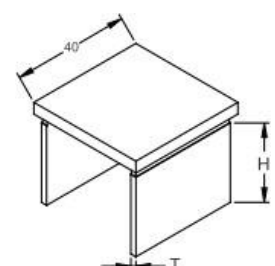
Dimensions
 Ø42.4 x 52 mm



END CAP FOR SQ SLOT HANDRAIL AISI 304/316

Material: AISI 304/316 Stainless steel
 Features: Closure CAP for tubular for sq slot handrail.
 Finish: brushed steel

Dimensions
 Ø42.4 x 52 mm



DEFENDER-® SLOT HANDRAIL / ROUND HANDRAIL & ACCESSORIES

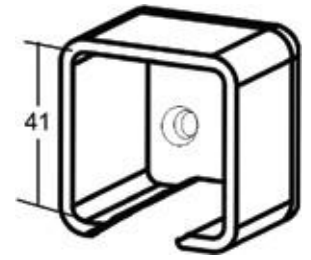


START FROM WALL FOR SQ SLOT
HANDRAIL AISI 304/316

Material: Stainless steel AISI 304/316

Features: Start for tubular handrail anchored
to the wall

Finish: Brushed stainless steel



VESNA INC

AN AUTHORISED CHANNEL PARTNER OF SAINT GOBAIN

END-TO-END SOLUTIONS FROM SAINT-GOBAIN.



PROJECT BRIEF

Project brief & solution proposal



SOLUTION

Customization as per Customer requirement



RAILING

Rapid Order Prossins & Installation execution



GLASS & INSTALLATION

Handover & Project completion



VESNA INC

AN AUTHORISED CHANNEL PARTNER OF SAINT GOBAIN

GLASS BALUSTRADE SOLUTIONS FROM SAINT-GOBAIN



VESNA INC

AN AUTHORISED CHANNEL PARTNER OF SAINT GOBAIN



Saint-Gobain India Private
Limited - Glass Business

Level 7,
Sigapi Aachi Building,
18/3 Rukmani
Lakshmi pathy Road,
Egmore, Chennai - 600 008,
Tamil Nadu.



VESNA INC

AN AUTHORISED CHANNEL PARTNER OF SAINT GOBAIN

FOR FURTHER DETAILS, CONTACT VESNA INC ON:

info@vesna.co.in

8130202552

8130265252

8130275252