

# ALUMINCO

ALUMINIUM BUILDING SYSTEMS

Glass supporting system  
Systèmes de garde corps vitrés

Crystalline<sup>®</sup>  
railing system



[www.aluminco.com](http://www.aluminco.com)





ALUMINCO, headquartered in Oinofyta Voiotias, was the first company in this sector which, since its establishment, launched the production of items made of cast aluminium in traditional designs.

After 31 years of experience in the aluminium sector, the company has evolved into a vertically integrated aluminium industry.

Its production facilities include integrated processing, powder coating, assembly, finishing, packaging and storage units for the products it produces and delivers.

ALUMINCO offers a wide range of aluminium products and systems, architectural and construction solutions, which include:

- A full range of tilt & turn as well as sliding, cold and thermal break aluminium systems, as well as curtain wall
- A variety of designs on aluminium panels for any architectural or construction requirement, with an emphasis on style, functionality and safety
- Safety doors and reinforced doors for main entrances suitable for private or commercial buildings. Available in traditional or modern designs, in a large variety of patterns and colors
- Railing systems for balconies, patios and stairs. In traditional and modern designs, made of cast aluminium, aluminium or inox type profiles and glass railing systems
- Outdoor systems, such as Pergolas, shading systems, canopies, gates, fences and lighting posts, offering integrated solutions for the construction of high demand buildings

ALUMINCO exports its products to over 60 countries globally and is always at the forefront of innovative development of products and systems satisfying the most demanding clients.

The powder coating process is certified by QUALICOAT and SEASIDE CLASS (seaside class processing) specifications. Furthermore, ALUMINCO also conforms to the ISO 9001 certified by TUV Austria, for quality management system and the ISO 14001 environmental management system.

All aluminium and railing systems are designed, developed and tested by our Research & Development department and are then certified by established institutes and international organizations, such as the IFT Rosenheim in Germany, the Istituto Giordano in Italy, the EKANAL (Greek Center of Aluminium Development) in Greece.

ALUMINCO, siégeant à Inofyta Viotias ( 40 km d' Athènes et 70km de l' aéroport international Eleftherios Venizelos ) fut la première société en Grèce qui a lancé la fabrication de produits en aluminium en fond d' alu au design classique.

Avec son expérience de plus de 31 ans, la société a évoluée dans une industrie d' aluminium verticale grâce aux investissements et développement de sa capacité de production.

ALUMINCO offre une vaste gamme de produits et systèmes en aluminium, en satisfaisant de demande les plus exigeantes, tels que:

- Une gamme complète de systèmes de menuiserie, ouvrant à la française, coulissant, coulissant à lever, mur rideau, en rupture thermique ainsi qu' en série froide.
- Une gamme variée de panneaux en aluminium, compatible avec tout les systèmes de menuiserie, au style contemporain ou classique
- Des portes d' entrée, portes de sécurité, adaptable aux bâtiments prive ou même de commerciaux, grâce aux grand choix de modèles
- Une gamme de systèmes de garde corps, le plus complet du marché.
- Nos systèmes d' ombrage, Pergolas, marquises, clôtures et portails et éclairage ne laissent pas aucune espace qui n' est pas «habille» par ALUMINCO

Les produits ALUMINCO sont diffusés dans plus de 60 pays à travers le monde ! guidés par nos clients et par la demande du marché, nous nous efforçons de satisfaire les demandes les plus exigeantes, aussi bien en qualité que en fonctionnalité.



Notre plant de laquage électrostatique, et procédure de laquage sont bien certifiés par QUALICOAT et selon spécifications de SEASIDE CLASS.

Le respect d' ALUMINCO pour l' environnement est bien prouvé par ISO 14001, et ISO 9001 ( norme internationale ) émis par l' organisme TUV d' Autriche ( gestion / management de la qualité )..

Pour suivre les tendances architecturales fortes, ALUMINCO et son équipe, commence par la conception, le design et finissent par la mise en œuvre de l' ensemble de produits et systèmes.

**Type A**

On-floor supporting system

Pose sur dalle

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**Type A10**

On-floor support system with 10mm glass

Pose sur dalle avec de verre de 10mm

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**Type A20**

Wedge on floor system

Pose sur dalle avec de profilé de sol en une pièce

**Type A20u**

In-floor wedge system

Systeme encastré en une pièce de profilé

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**Type C2**

On-floor system

Pose sur dalle

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**Type B**

adjustable system for on-floor installation

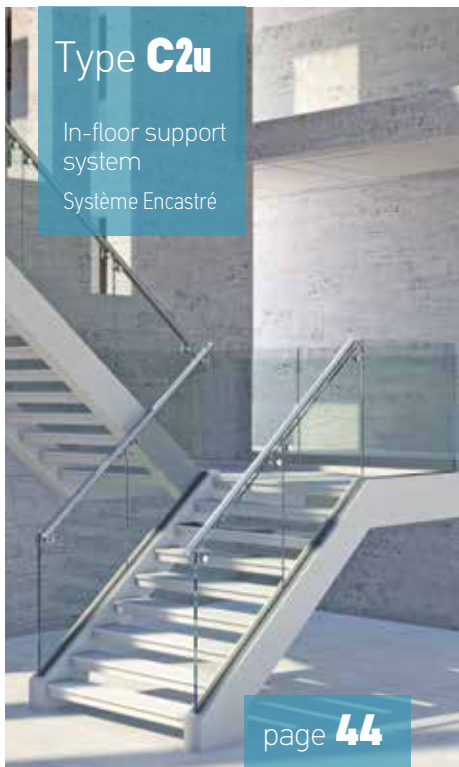
Systeme réglable, pose sur dalle

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### Type **C2u**

In-floor support system  
Système Encastré



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### Type **D**

Fascia mount system  
Pose sur nez de dalle



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### Type **Ds**

External support with glass brackets  
Pose sur nez de dalle avec des adaptateurs a verre



### Type **Dc**

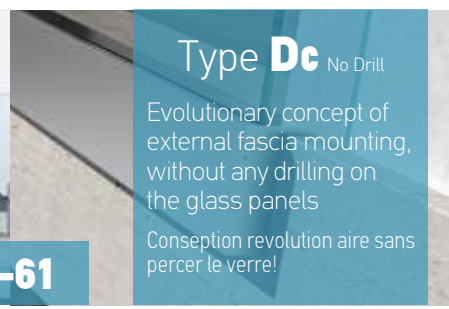
External support with fascia aluminium profile  
Pose en applique (nez de dalle)



page **60-61**

### Type **Dc** No Drill

Evolutionary concept of external fascia mounting, without any drilling on the glass panels  
Conception revolutionaire sans percer le verre!



Top handrails & brackets  
Main courante et fixations



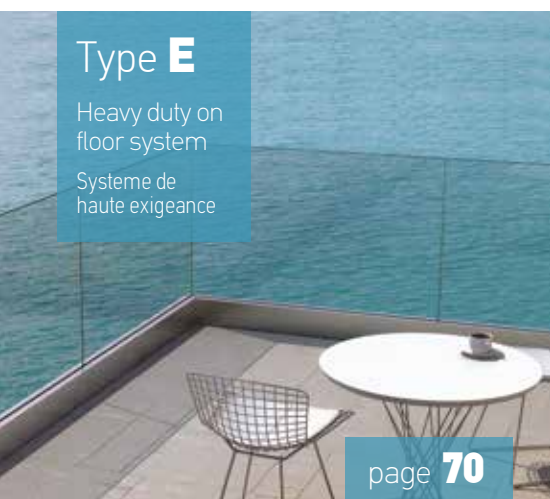
Glasses Verre



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### Type **E**

Heavy duty on floor system  
Système de haute exigence



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Accessories Accessoires



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## General information Informations générales

### Aluminium

No other material can match the characteristics of aluminum. Light weight but strong at the same time, resisting to the most severe weather conditions, due to the application of oxide layer that protects the metal from corrosion. This layer is further strengthened by anodisation, providing even greater weather resistance. Furthermore, it is the most environmental friendly metal, as it is fully recyclable and non-toxic.

Aluminium has a unique combination of attractive properties:

- Low weight
- High strength
- Superior malleability
- Easy machining
- Excellent corrosion resistance
- Easy to mill, drill, cut, punch, bend, weld, bond, tape.

Unless stated otherwise in our catalogue, all of Crystalline types are brushed and anodized, make them ideal for both indoor and outdoor use.

**Cleaning:** Aluminium products can be cleaned with warm water and soap.

*Did you know?*

*Some 75 percent of all aluminium ever produced is still in use! Aluminium can be reused for the same purposes over and over again. Unlike many other materials, aluminium does not lose its unique properties. Furthermore, the energy needed to produce secondary aluminium is only 5 percent of the original energy input.*

### Use of glass panels in Crystal Line installations

A wide range of glass panels can be integrated with CRYSTAL LINE system, in various thicknesses and characteristics according to specifications. There are two main categories according to EN12543 and EN12600 specified by the European Union concerning the thermal treatment of the glass.

More specifically, EN12543 specifies the use of tempered and laminated glass with the insert of PVB membranes. This type of glass panels have the following qualities:

- In case of breakage, they do not break in large and sharp pieces.
- Even in case of such breakage, the broken glass pieces remain attached on the PVB surface without putting in danger the safety of nearby persons. The fabrication of these tempered and laminated glass panels is being carried out by thermal treatment of ordinary glass which is afterwards sandwiched together with the PVB membranes to give the various grades and thickness of laminated glass panels.

In the following pictures show the different types of breakage:

- Tempered and laminated glass, and
- Ordinary tempered glass.



**Toughened Glass**  
Thermally Toughened glass



**Laminated Glass**  
TRIPLEx glass with PVB membrane

### Aluminium

Il est difficile de trouver un autre matériel avec tels caractéristiques que aluminium. Leger mais robuste en même temps, résistant au conditions climatiques les plus sévères, grâce al' application d' une couche fine d' oxyde qui l' en protège de corrosion.

Cette couche devient encore plus forte par le procédure d' anodisation pour une protection contre la corrosion le plus efficace.

A ne pas oublier que l' aluminium est totalement recyclable et respectueux de l' environnement.

Ses caracteristiques uniques

- Leger & robuste
- Non toxique
- Propriété mécanique excellent
- Usinage facile
- Résistant au corrosion
- Rapport prix – qualité excellent

Sauf autrement indique, la finition standard de toutes profiles du système CRYSTALINE sont disponible an aluminium anodise et brosse en teint d' inox.

*Saviez vous que 75 pourcent de produits fabrique n aluminium, sont toujours utilisables. Aluminium peut être recycle pour plusieurs fois.*

*Ses caractéristiques mécaniques ne sont pas déformés comme dans des autres cas. L' énergie utilise pour recycle l' aluminium est a 5% par rapport a son production primaire.*

### Generalites sur les garde corps Crystal Line

Le système CRYSTAL LINE offre des solutions polyvalentes ou des différent dimensions de vitrage, selon le type et Avis Technique sont adaptes. Pour des raisons liées a la sécurité des personnes, ces éléments verriers doivent conformer aux Normes Européens (EN12543 &EN12600) qui spécifie le traitement thermique par un processus de trempé (refroidissement rapide).

Plus précisément, la gamme de systèmes CRYSTALINE s' installe avec de verre trempé et feuilleté ou lamine de son nom technique, constitue d' au moins deux feuilletés de verre séparées par de films intercalaires (PVB).

C' est grâce aux ces propriétés mécaniques et résistance au choc, que même au cas de blessure, le verre ne présent pas aucune risque lorsque les pièces casses sont retenue par le film PVB.

La fabrication de verres trempés et feuilletés est fait par un traitement thermique qui rendent les verres ces qualités de sécurité.

Les photos ci-dessous montrent les différent types de brisure :

- Verre trempé
- Verre trempé et feuilleté

## PVB films

The common characteristics amongst the two categories mentioned previously, are the use of the PVB interlayer films.

The film is of a tough yet pliable material known as polyvinyl butyral (PVB), placed in layers between the glass.

Rollers press the layers together to expel any air pockets. The glass is then heated to 70°C in a pressurized oil bath to permanently bond all layers together. Typically the thickness of each PVB film is 0.38mm, additional layers of glass and PVB film increase the strength of the material. Applying two interlayers of film, the thickness becomes 0.78mm, with three at 1.14mm and so on.

Apart from the different thickness of glass and PVB, a wide range of colored PVB, for example grey, blue green or yellow is available, offering a particular esthetic to modern buildings.

According to European Normes ( EN 12600 ) the minimum number of films required is two, however ALUMINCO recommends the use of glass with four PVB films for maximal security.

Even in the event that the glass breaks, the two layers are held together by the PVB, allowing the sheet as a whole to bend and absorb the impact. This characteristic is especially important for places where safety or security are paramount.

## Types of securit glasses

The most common type Triplex glass consists of the combination of Heat Strengthened Glass – PVB – Heat Strengthened Glass. The result of a Heat Strengthened glass panel will resist two times stronger than ordinary glass, where a unified static force has been applied ( EN 12543 ), to one of the same thickness.

The second type of Triplex glass, and the one which meets the safety criteria is Thermally Toughened Glass, and its combination with PVB, known as toughened glass. Toughened Glass is manufactured by subjecting the finished glass size to a heating and cooling treatment which set up high compressive stresses at the surface, and balancing tensile stresses in the centre of the glass, thus increasing its strength. The result is a glass that is 5 times stronger than ordinary glass.

Heat strengthened glass is produced by a similar process to toughened glass, however, the strength developed is about half that of toughened glass, and its breakage resembles that of annealed glass.

ALUMINCO strongly recommends the use of Heat Strengthened Glass with the installation of any type of Crystal Line system.

## Aluminco recommends

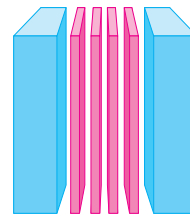
Offering products and which have been carefully verified and selected to compliment our systems, is a long standing policy of ALUMINCO. The safety factor is a very important one to be considered when designing a new railing system as it is a vital aspect for any type of construction.

To make all this possible, we have invested considerable amount of time and resources in Research and Development (R&D), who carries out continuous tests in-house before proceeding with final certification.

All types of CRYSTALINE have been tested and certified for static load and impact load, and they conform with NF-P01-13: 1988 and NF-P 08-301;1991 by Instituto Giordano as well as per TRAV by IFT ROSENHEIM.

Recommended glass to be used is 88.4, 1010.4 & 21.4, all with four interlayers of PVB for maximal security. Although most types of Crystal Line systems have been tested and certified without applying a handrail, its use is recommended as it improves significantly the mechanical support in total, and protects exposed edge glazing in the presence of mechanical or environmental stresses.

## PVB films



■ Glass  
 ■ PVB film

Le membrane PVB est un intercalaire qui retient les fragments de verre en cas de casse due a des heurts accidentels, le vitrage reste en place, si encadre et il n'y a pas de chute de morceaux dangereux.

L'épaisseur d'un membrane PVB est de 0.38mm, en pratique on utilise plusieurs membranes de cette épaisseur afin d'accroître la durabilité et l'élasticité du vitrage feuilleté. En ajoutant deux membranes l'épaisseur devient 0.76mm en ajoutant un troisième cela devient 1.14mm etc...

le PVB est disponible dans une gamme de couleurs allant du transparent, le gris le jaune et beaucoup d'autres combinaisons qui permettent de réaliser une balustrade en harmonie avec l'esthétique de résidence.

Pour être en règle avec les European Standards ( EN 12600 ), il faut au moins utiliser 2 membranes PVB entre deux parties de vitrage. Pour utiliser nos système CRYSTALINE, ALUMINCO recommande de toujours regarder situation par situation et de ne jamais hésiter a mettre un PVB en trop pour accroître la sécurité.

## Typologie de verre trempé et feuilleté



Le verre, matériaux de construction, est un moyen d'ajouter de style et élégance, mais ce qui est le plus important c'est la sécurité de personnes.

Dernièrement, le verre a utilisé avec les garde corps vitres, sont de verre trempé et feuilleté.

Le verre feuilleté est un assemblage de feuilles de verres et d'intercalaires de nature plastique. Les intercalaires peuvent se présenter sous forme de film, généralement ( Poly - Vinyle - Butyral ).

Ses caractéristiques, ils conservent les propriétés lumineuses et énergétiques, des

produits de base. Une fois trempés, ils ne peuvent plus être découpés ni façonnés.

Le verre feuilleté pour bâtiment fait l'objet de la norme EN ISO 12543.

## Aluminco recommend

Sécurité et qualité sont nos priorités. Toutes les phases de fabrication s'effectuent par la conception, en passant par le design et développement de produits finis.

Inspire par nos clients et par la demande du marché, ALUMINCO recherche et préconise de matériaux qui compliment sa gamme de produits en prenant compte des exigences de Normes Européennes.

Notre équipe de R & D n'arrête jamais a développer de systèmes fonctionnels et performants tel que votre bâtiment en mérite.

Tout les types de CRYSTALINE sont testés et certifiés selon l'Avis Technique de Normes NF P01-13 :1988 & NF P08-301 : 1991, par Instituto Giordano autant que selon TRAV par IFT Rosenheim.

Bien que la plupart de systèmes CRYSTALINE sont certifié pour montage sans main courante, ALUMINCO conseille son usage pour de raisons de sécurité et protection des arrêtes poli de verre, contre de conditions climatiques sévères.


# Type A

## On-floor glass supporting system

Système de base apparente supportant le vitrage (pose à la française)




### On-floor glass supporting system

 The supporting brackets, in hard aluminium alloy, are installed on fully finished floor, ceramic tile, marble or on a balcony parapet.

Glass panels of 88.4 thickness / 17.52mm and maximum height of 1200mm, are anchored with bolts which can easily be removed in case of need without any damage to the floor or system itself. The brackets are covered by the oval shape fascia profiles in anodized finish as well as many other shades of powder coating.

### Système de base apparente supportant le vitrage

 Il s'agit de système de garde-corps en verre solidarisés au gros œuvre «en pied», fixes en dalle.


Type A peut être utilisé dans des espaces publics ou privés tant à l'intérieur qu'à l'extérieur.

Le montage comporte les vitrage de 88.4 épaisseur de 17.52mm et hauteur a 1200mm, qui sont fixe par serrage et fini avec les profiles d'habillage.






## Advantages

 It is an ideal solution for balconies, stairs and building enclosures for high architectural standards, offering an impressive and functional result with no view limit.

- Elegant line
- Maximum security
- Uninterrupted view
- Free of maintenance
- Patented system
- Compliance with UNI EN 10807 & NFP01-013
- Optional use of top handrail
- Wide choice of colors : RAL, Sable & anodized

## Caracteristics

 C'est un système idéal pour des terrasses, des rampes, des passerelles et des clôtures de bâtiments de haut standard. Il offre un résultat impressionnant et fonctionnel, ne limitant pas la vue.

- Elégant
- Réponds aux critères de sécurité
- Vue illimitée
- Pas d'entretien
- Système breveté
- Selon Avis Technique UNI EN 10807 & NF P01-013
- Option de main courante
- Choix de coloris – RAL, Sable, anodize & teint de bois

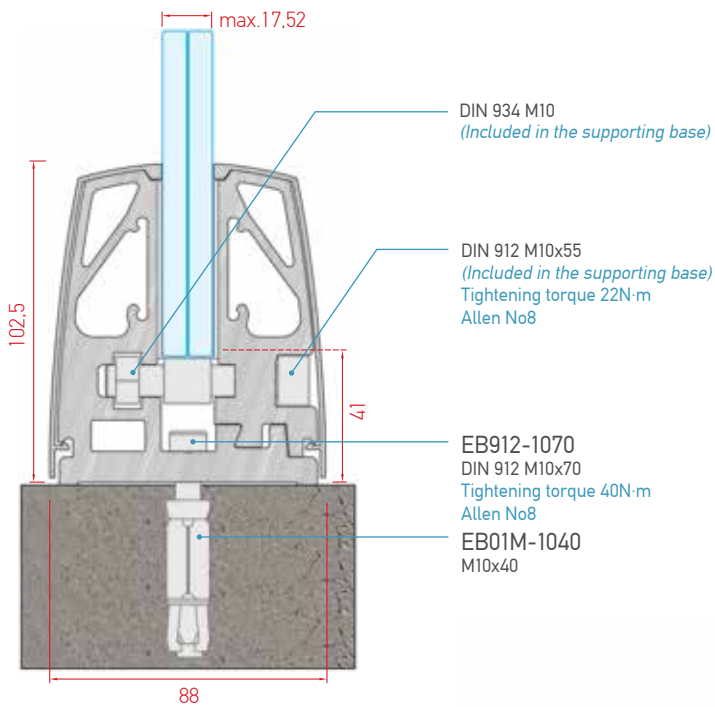


# Type A

## On-floor glass supporting system

Système de base apparente supportant le vitrage (pose à la française)

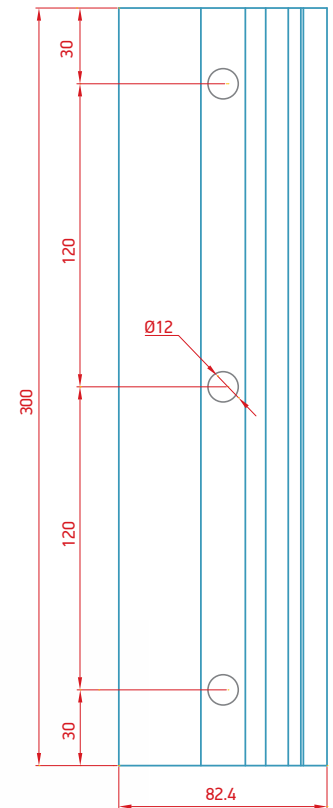
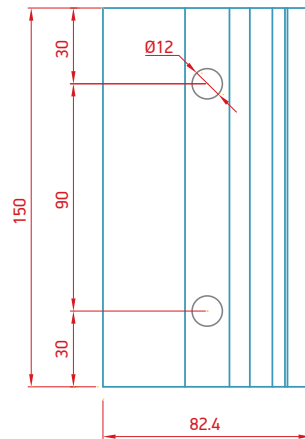
### Technical specifications / Specifications techniques



### Fixing point / Detail de fixation

F85-150A

F85-300A



Glass section A	
<b>16mm</b>	
Min. 16.76mm	
Max. 17.52mm	
Recommended glass	
17.52mm (8-1.52-8)	

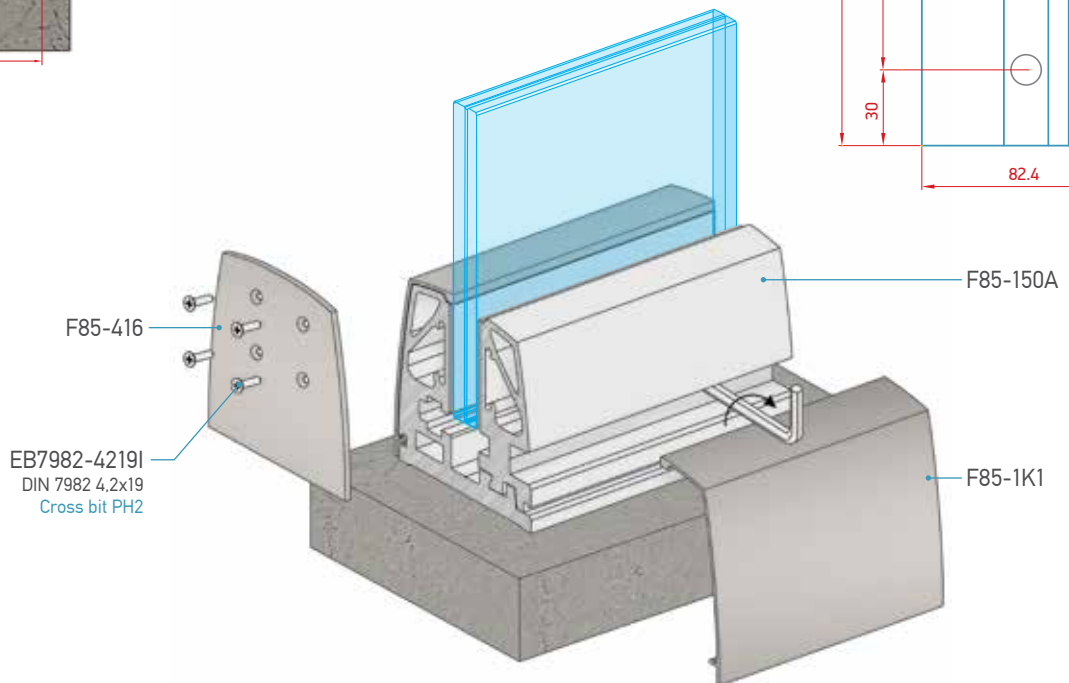


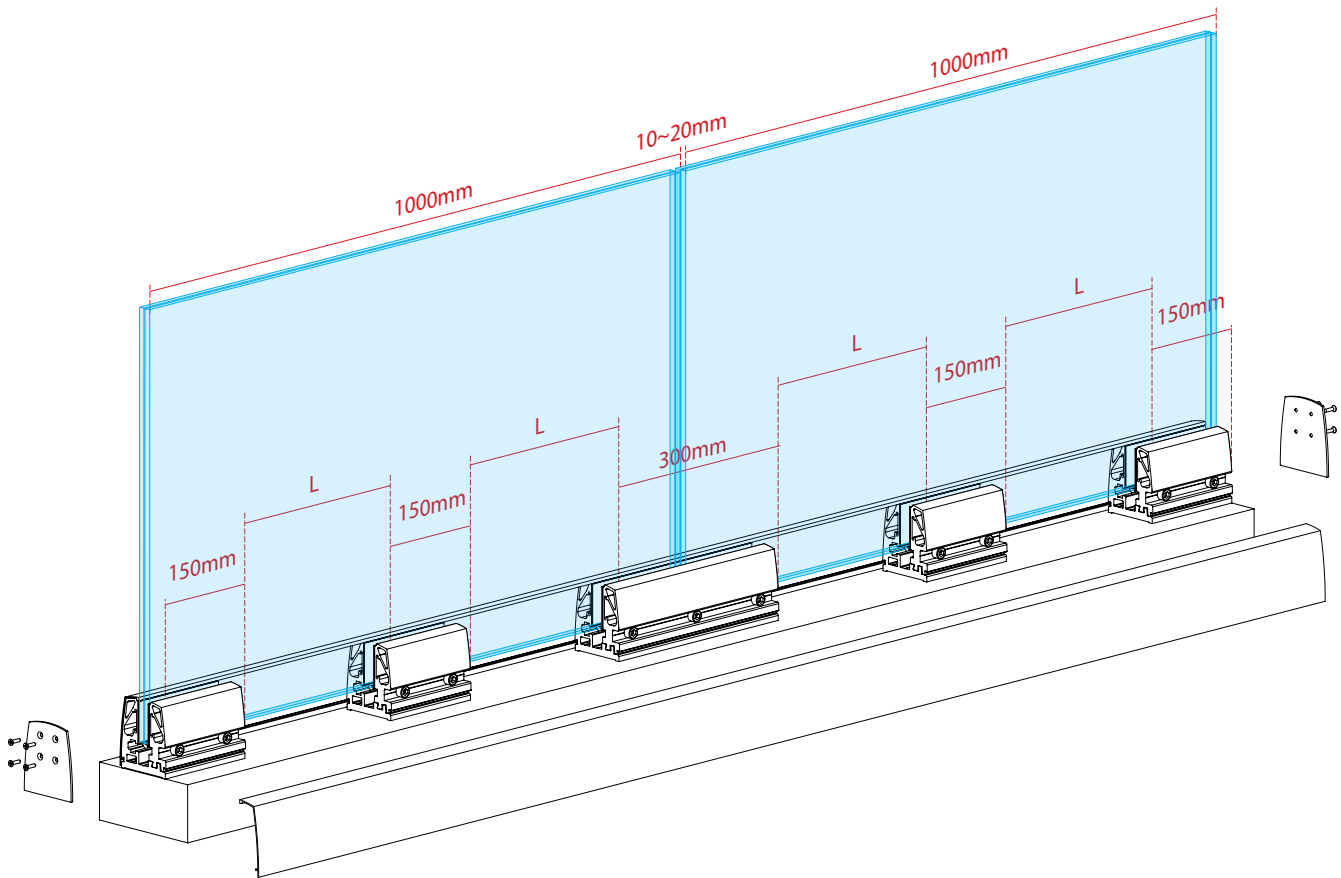
Table of system certifications

Type	Handrail	Type of glass	Type of membrane	Glass height	Linear load	Impact energy	Certification organization
A	-	8+8mm LAMIN.	4x0.38mm PVB	1200mm	-	442 J	IFT Rosenheim*
A	F85-201	8+8mm LAMIN.	2x0.38mm PVB	1000mm	0.65 Kn/m	600 J	Istituto Giordano**

According to: \*TRAV 2003-01 | \*\*NF P01-013:1988, NF P08-301:1991 | \*\*UNI 10807:1999

Supporting base assembly / Installation de Type A

Standard supporting base type A assembly for glasses with a length of 1000mm



Recommended number of bases / m	8mm+4PVB+8mm (88.4)			
	Glass height	Handrail	No. of bases / m	L
600mm	-	-	3	275mm
	F85-200	-	2	700mm
	F85-201	-	2	700mm
1000mm	-	-	3	275mm
	F85-200	-	3	275mm
	F85-201	-	3	275mm
1100mm	-	-	4	133mm
	F85-200	-	3	275mm
	F85-201	-	3	275mm
1200mm	-	-	5	62,5mm
	F85-200	-	4	133mm
	F85-201	-	4	133mm

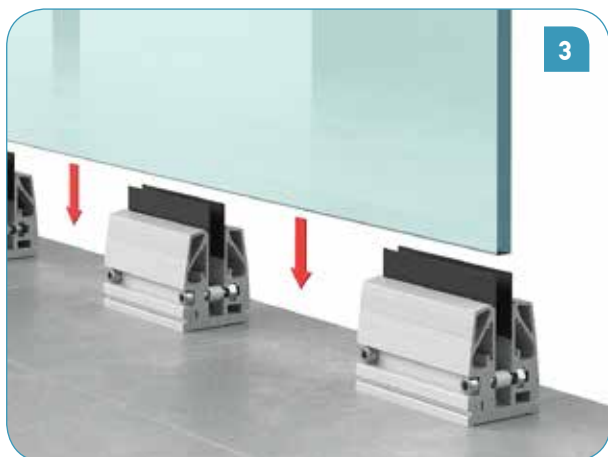
The stated results are only indicative and do not guarantee the system's durability since they are not a result of a structural study.

# Type A

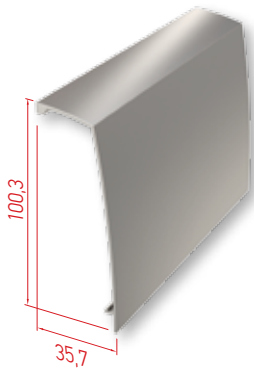
## On-floor glass supporting system

Système de base apparente supportant le vitrage (pose à la française)

### Installation step by step / Etapes d'installation



Profiles & accessories / Profilés & Accessoires



Base cover

Code	<b>F85-1K1</b>
Weight	550 gr/m
Length	6 m



Cap

Code	<b>F85-416</b>
Package	20 pcs.



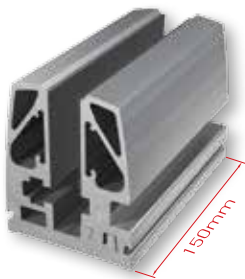
Cap

Code	<b>F85-416L*</b>
Package	20 pcs.

\* glass 17,52mm

Glass supporting bases / Base supportant le vitrage

*The supporting bases include tightening screws and pressure gaskets.*



Glass base

Code	<b>F85-150A</b>
Package	12 pcs.



Glass base

Code	<b>F85-300A</b>
Package	6 pcs.

## Type A10


On-floor support system with 10mm glass  
Pose sur dalle avec de verre de 10mm



### On-floor support system with 10mm glass


 Light in weight but safe for residential and light-weight commercial use, this wedge system is designed to be installed on a finished floor, with a laminated glass of 55.2 and thickness of 10.76mm. Suitable for the interior as well as exterior balconies, terraces and swimming pools. Easy and quick to align, the glass panels are secured with gaskets and bolts, supplied by the manufacturer. Maximum height at 100cm is recommended and use of top handrail is essential.

### Pose sur dalle avec de verre de 10mm

 Pour gagner du temps et de l'argent, choisissez le type A10! Le profil de sol, prêt à l'emploi, c'est à dire incluant les gâches et visserie, donne une installation rapide et facile. La solution économique pour des lieux publics et privés. Le verre est fixé par serrage, aucune perçage sur le verre n'est requis.



## Advantages

 The perfect choice for private or light commercial use, with impressive simplicity and elegance.

- Attractive slim lines
- Affordable quality for 10mm glass
- No maintenance required
- Patented system
- Compliance by TRAV specifications
- Quick installation
- Wide range of color options, RAL, Sable & anodized.

## Caracteristics



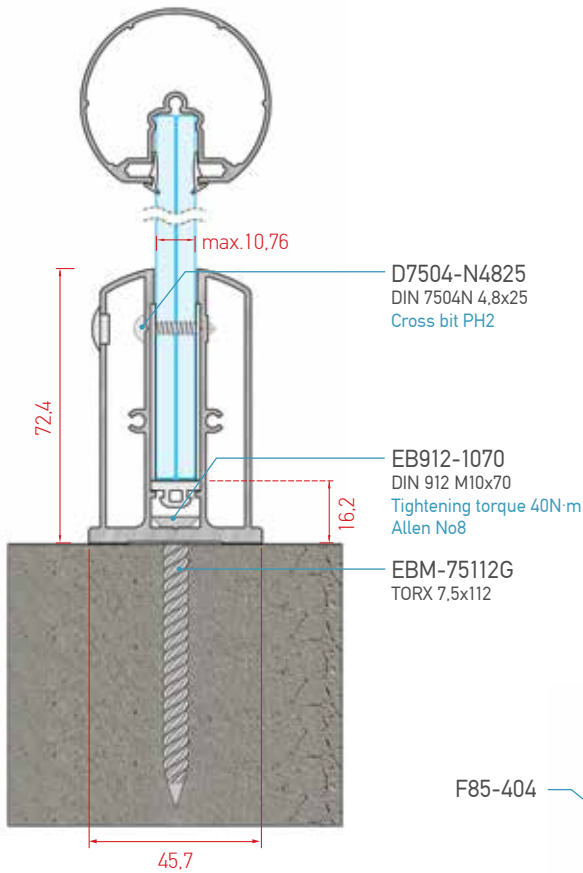
- Élégant et transparent
- Economique
- Système breveté
- Léger et facile à monter.
- Spécifications selon TRAV (allemands)
- Choix de coloris – RAL. Sable, anodisé & teint de bois.



# Type A10

On-floor support system with 10mm glass  
Pose sur dalle avec de verre de 10mm

## Technical specifications / Specifications techniques



D7504-N4825  
DIN 7504N 4,8x25  
Cross bit PH2

EB912-1070  
DIN 912 M10x70  
Tightening torque 40N·m  
Allen No8

EBM-75112G  
TORX 7,5x112

Glass section A10
<b>10mm</b>
Min. 10.76mm
Max. 11.52mm
Recommended glass
11.52mm (5-1.52-5)

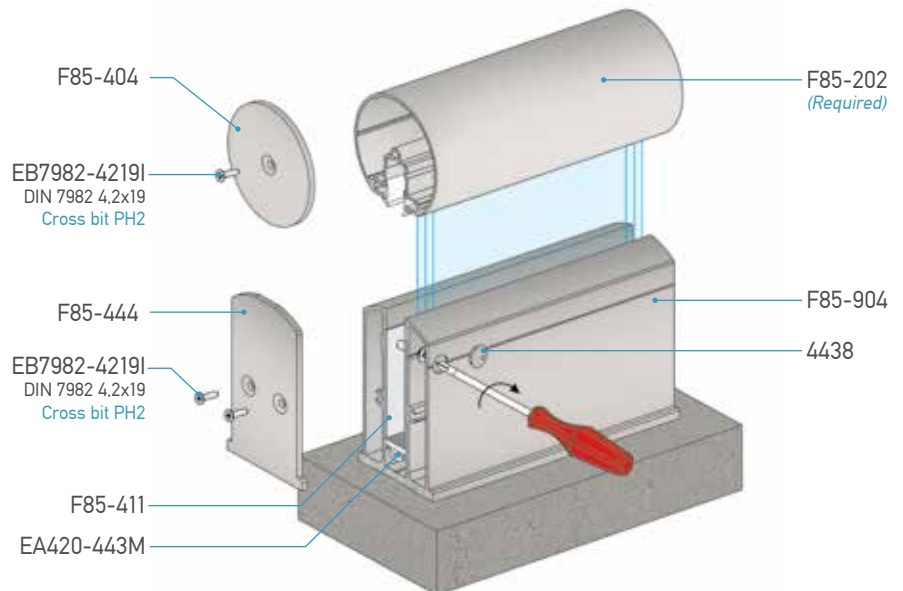


Table of system certifications

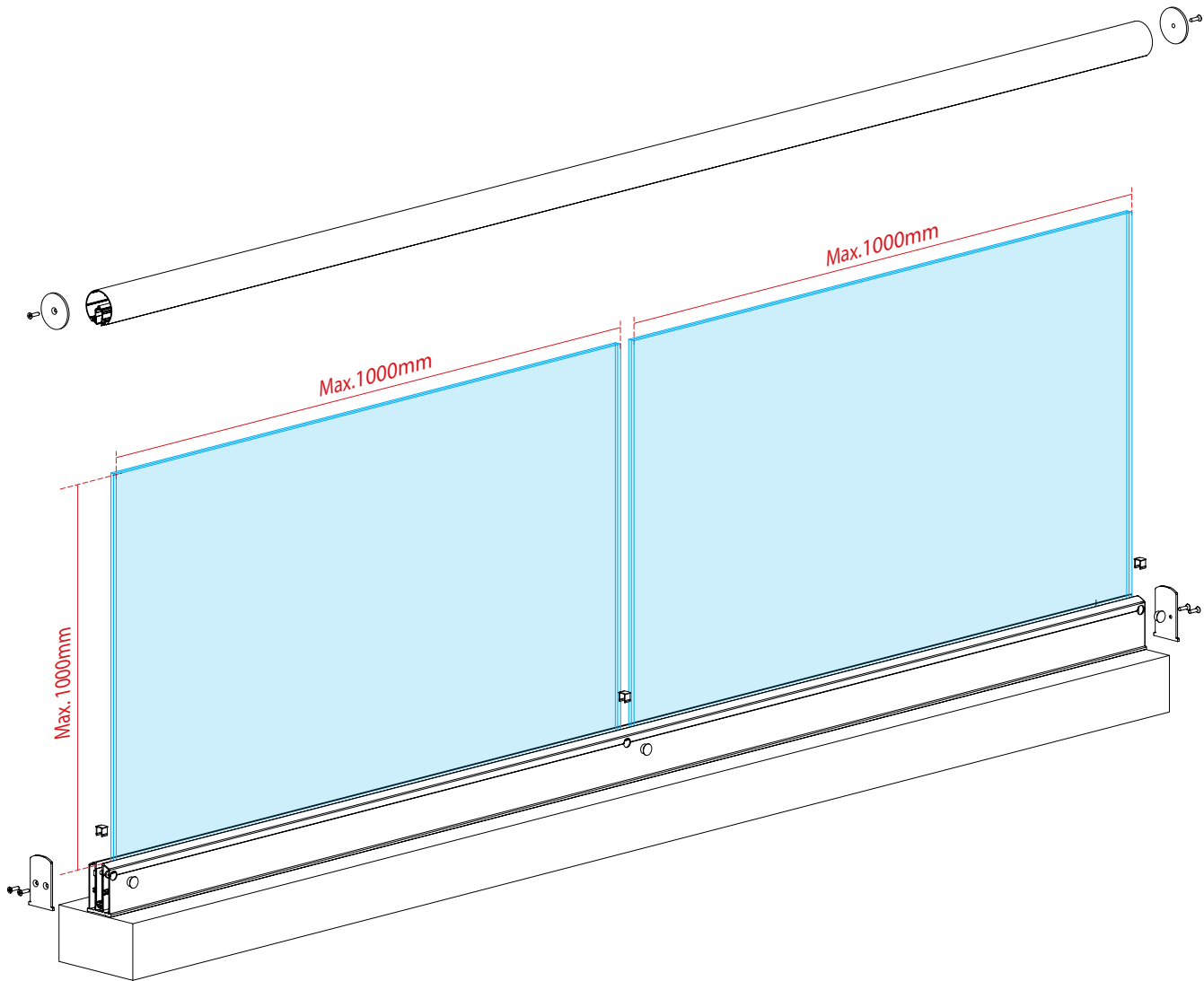
Type	Handrail	Glass type	Type of membrane	Glass height	Linear load	Impact energy	Certification organization
A10	F85-202	5+5mm LAMIN.	2x0,38mm PVB	1000mm	-	343 J	IFT Rosenheim

According to: TRAV 2003-01



## Installation of Type A10 / Montage sur dalle avec Type A10

Standard supporting base type A10 assembly for glasses with a length of 1000mm



### ATTENTION!

System specifications

- a) maximum glass high 1000mm
- b) to be installed with hand rail F85-202
- c) indispensable use of bolts per meter

### ATTENTION!

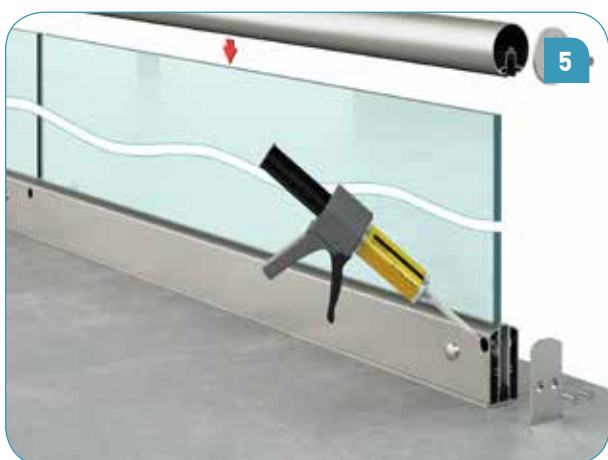
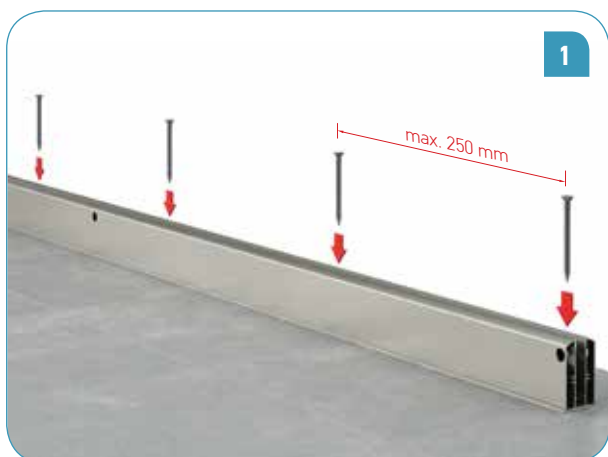
Specification du système

- a) hauteur de verre maximale de 1000mm
- b) utilisation obligatoire de main courante F85-202
- c) installation sur dalle avec 4 vis per metre

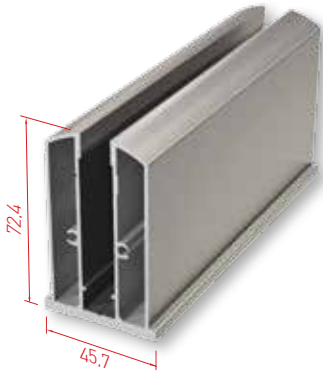
# Type A10

On-floor support system with 10mm glass  
Pose sur dalle avec de verre de 10mm

## Installation step by step / Etapes d'installation

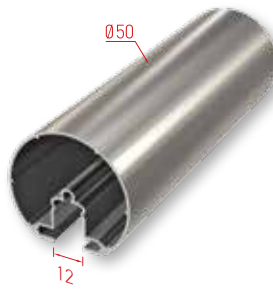


Profiles & accessories / Profils & Accessoires



Base profile

Code	<b>F85-904</b>
Weight	1796 gr/m
Length	6 m



Handrail profile

Code	<b>F85-202</b>
Weight	721 gr/m
Length	6 m



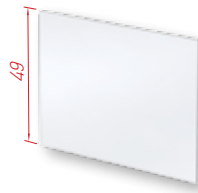
Cap

Code	<b>F85-444</b>
Package	20 pcs.



Hole covering cap

Code	<b>4438</b>
Package	50 pcs. (κούτα) 24 pcs. (blister)



PVC sheet 1mm

Code	<b>F85-411</b>
Color	White
Length	2 m



Base gasket

Code	<b>EA420-443M</b>
Length	150 m



Handrail gasket

Code	<b>EA410-420M</b>
Length	350 m


## Type A20

### Wedge on floor system


Pose sur dalle avec de profile de sol en une piece



### Wedge on floor system

 This new wedge system is totally frameless, without any intervention of columns or additional support and ensures crystal clear view and unique feeling of freedom.

### Pose sur dalle avec de profile de sol en une piece

 Avec ce système, le design rencontre la sécurité, grâce au profile de base d'une seule pièce et du verre sans aucun intermédiaire. Fixation sur dalle avec ca-lages et joints PVC.



## Advantages



- One-piece floor profile for quick installation
- Optional in-floor installation
- Colour choice – RAL, Sable & anodized
- Minimal design
- Limitless transparency and view
- Optional use of handrail

## Caracteristics



- Support d' un seul block
- Option d' installation encastre
- Choix de coloris – RAL, Sable & anodize
- Design minimal
- Vue transparente
- Option de main courante

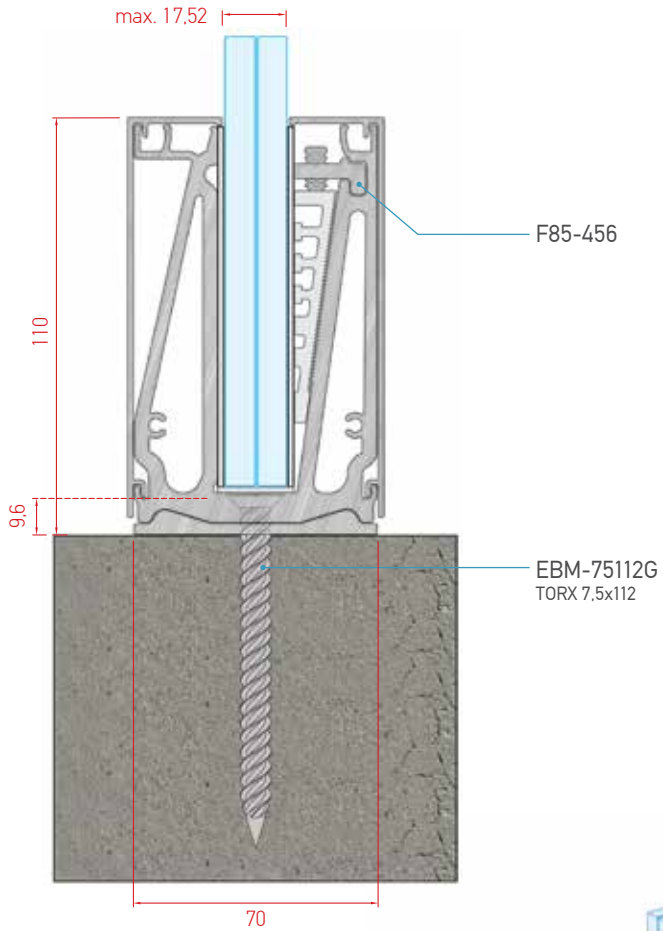


# Type A20

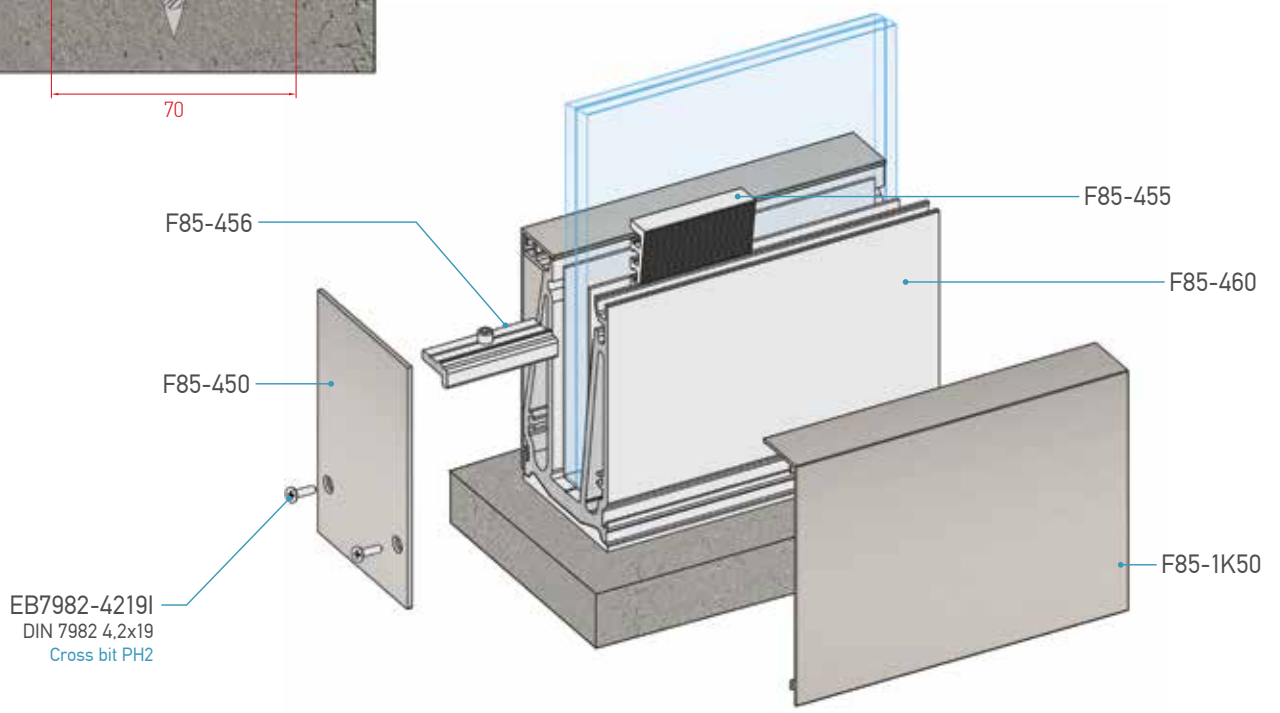
## Wedge on floor system

Pose sur dalle avec de profile de sol en une piece

### Technical specifications / Specifications techniques

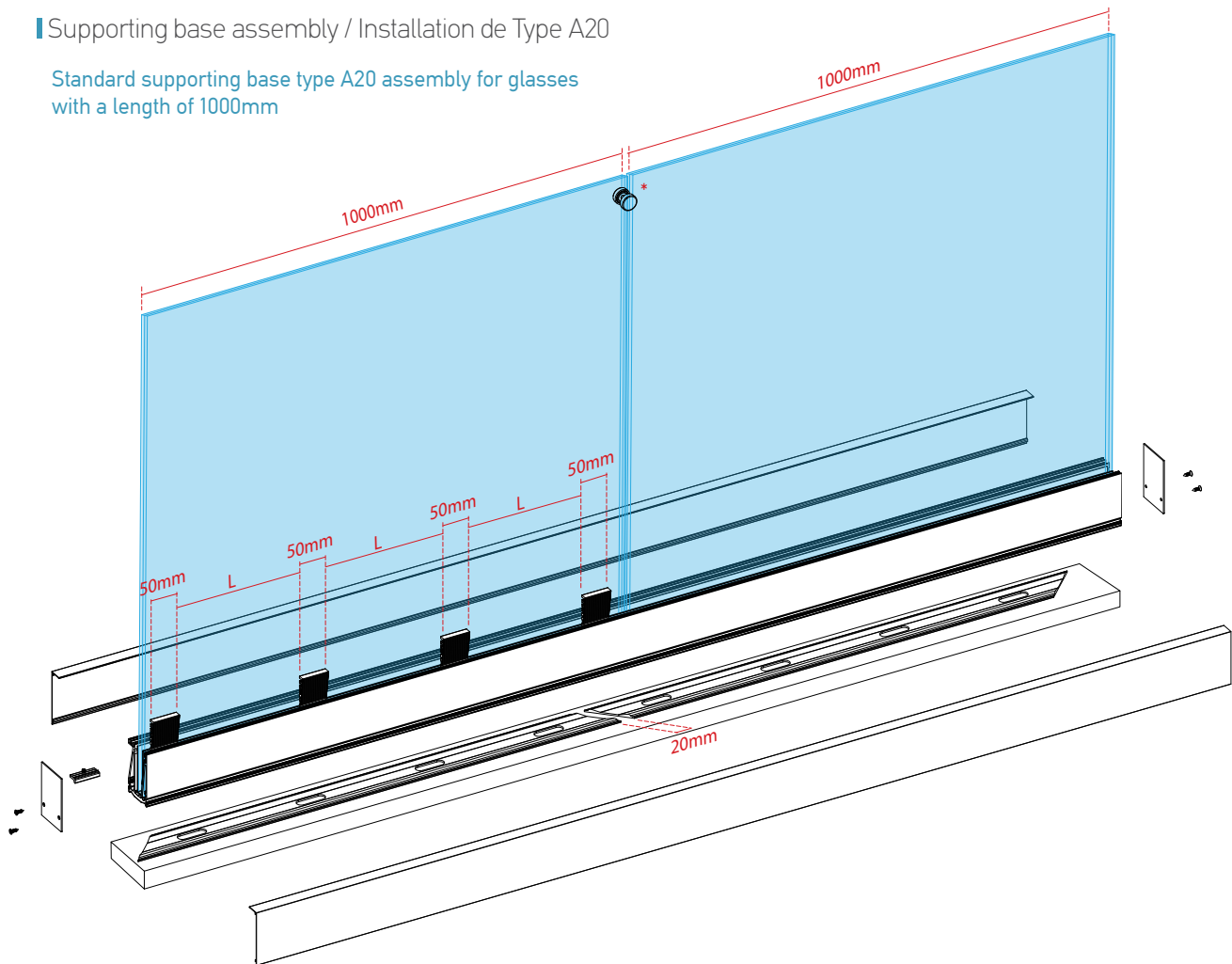


Glass section A20
<b>16mm</b>
Min. 16.76mm
Max. 17.52mm
Recommended glass
17.52mm (8-1.52-8)



Supporting base assembly / Installation de Type A20

Standard supporting base type A20 assembly for glasses with a length of 1000mm



Recommended number of bases / m	8mm+4PVB+8mm (88.4)		
	Glass height	Handrail	No. of bases / m
600mm	-		4
	F85-200		4
	F85-201		4
1000mm	-		5
	F85-200		4
	F85-201		4
1200mm	-		5
	F85-200		5
	F85-201		5

*The stated results are only indicative and do not guarantee the system's durability since they are not a result of a structural study*

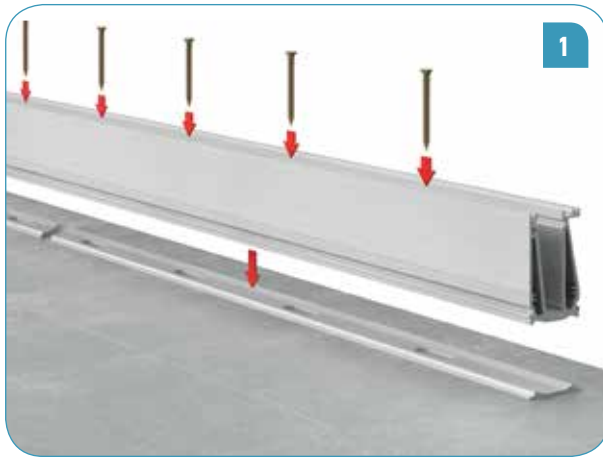
\* Use of F85D-130 is optional / Utilization de F85D-130 en option

# Type A20

## Wedge on floor system

Pose sur dalle avec de profile de sol en une piece

### Installation step by step / Etapes d'installation





Profiles & accessories / Profilés & Accessoires



Cap

Code **F85-450**

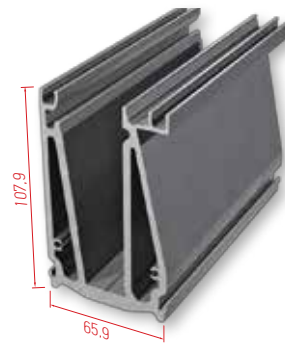
Package 20 pcs.



Pressure plate

Code **F85-455**

Package 20 pcs.

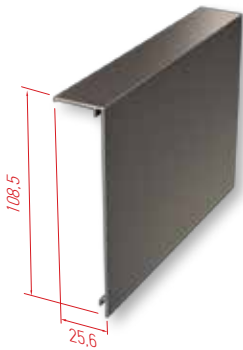


Wedge Profile

Code **F85-460**

Length 3 m

\* Available in three meter pre-cut and pierced /  
Disponible en 3 metres percé



Base cover

Code **F85-1K50**

Weight 572 gr/m

Length 6 m



Drainage base profile

Code **F85-457**

Length 1 m

Package 10 pcs.



Pressure plate restrainer

Code **F85-456**

Package 20 pcs.



PVC constrictor 1,5mm

Code **F85-459**

Color Black

Length 2 m



PVC constrictor 1,5mm

Code **F85-458**

Color Black

Length 2 m

# Type A20u

In-floor Wedge System  
Système encastré en une-pièce





### In-floor Wedge system



Save time and money with this new system!

Floor profile supplied in pre-cut and drilled, at three meter length. Specified glass is 88,4 and maximum height at 1200mm.

### Système encastré en une pièce



Une nouvelle conception de système encastré.

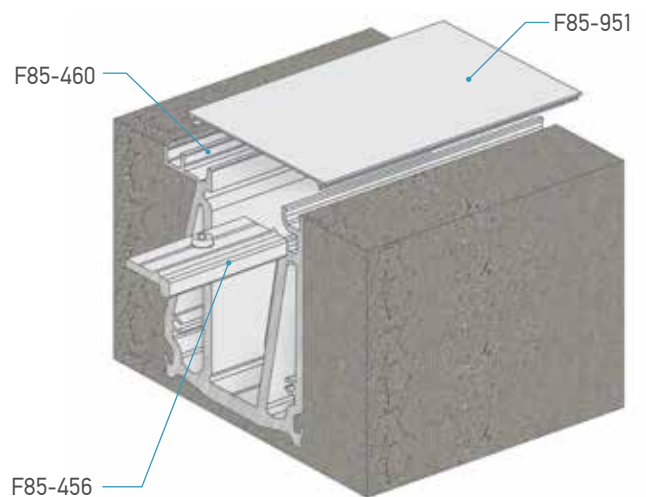
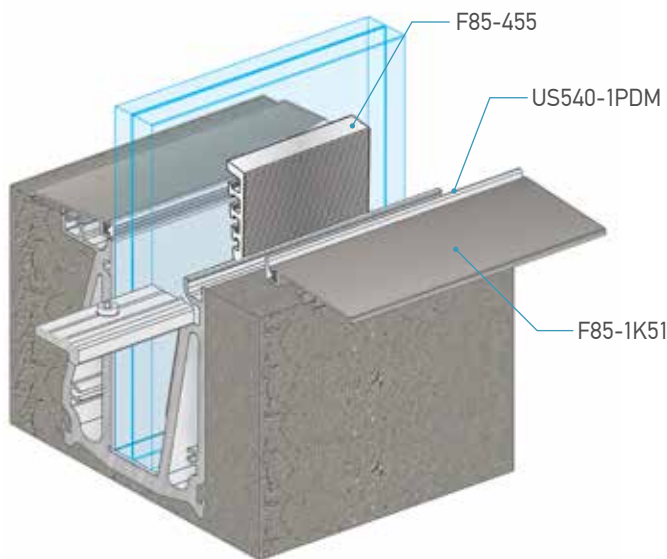
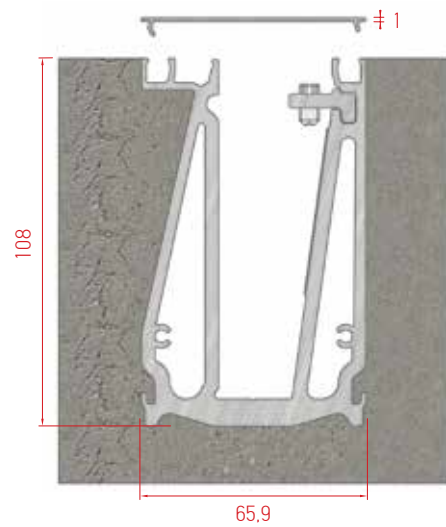
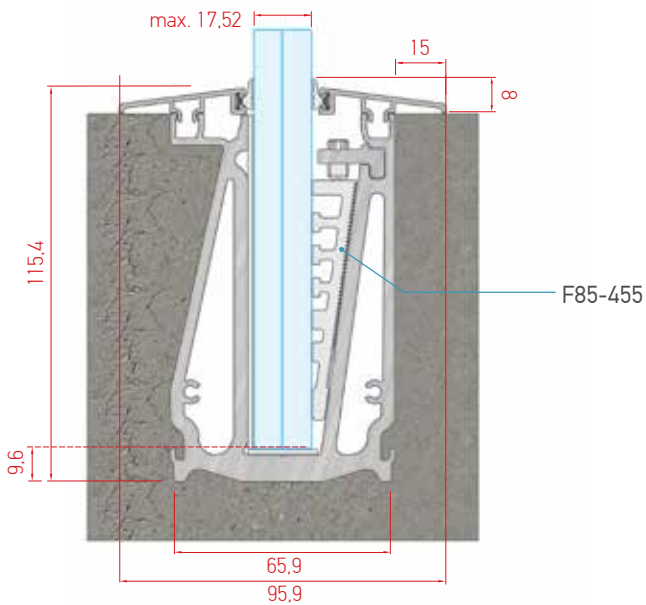
Gagnez du temps, et d'argent!  
Profilé de sol, prêt à l'emploi, verre préconisé de 88,4, épaisseur de 17,52mm. Hauteur maximale de 1200mm

# Type A20u

## In-floor Wedge System Système encastré en une-pièce

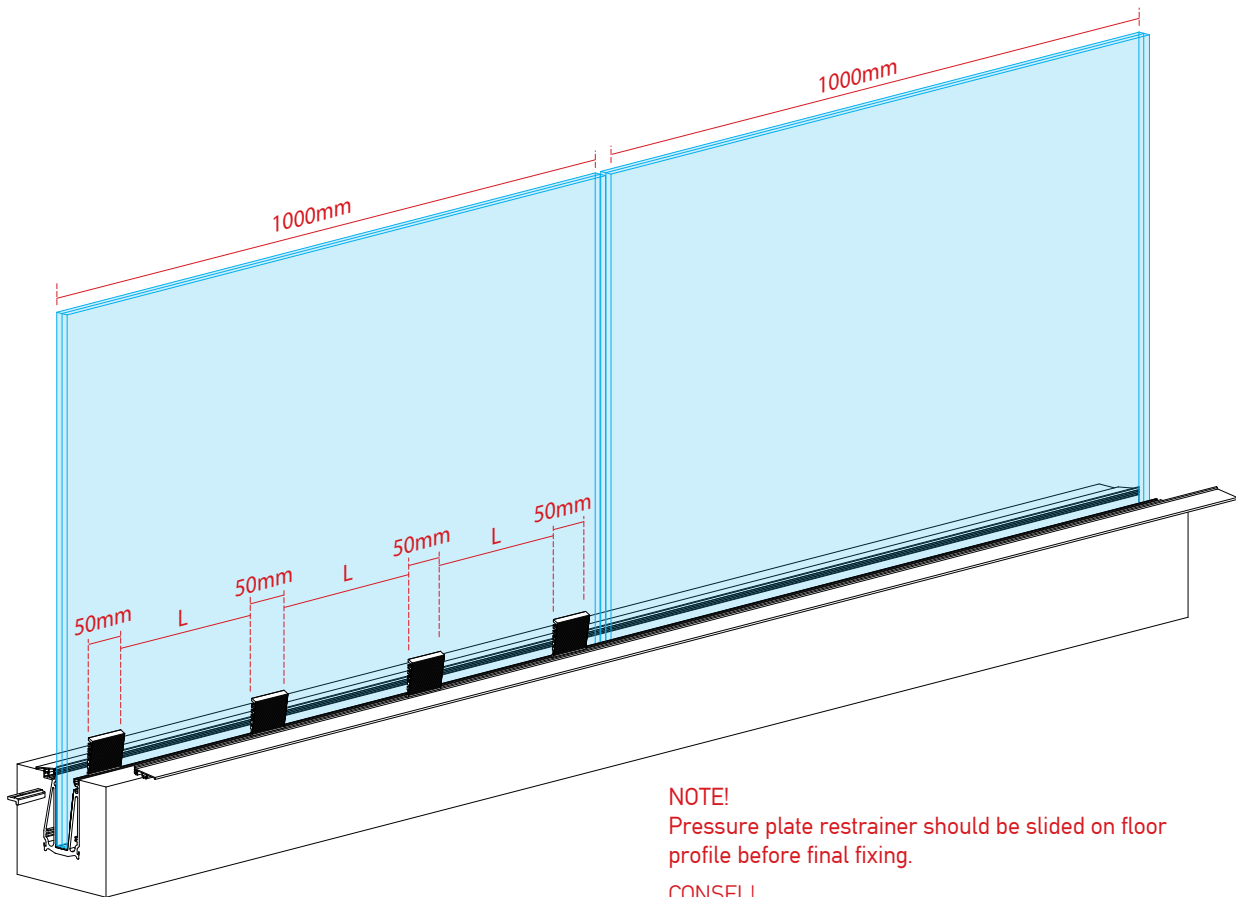
### Technical specifications / Specifications techniques

Glass section A20u
<b>16mm</b>
Min. 16.76mm
Max. 17.52mm
Recommended glass
17.52mm (8-1.52-8)



Supporting base assembly / Installation de Type A20u

Standard supporting base type A20u assembly for glasses with a length of 1000mm



**NOTE!**

Pressure plate restrainer should be slided on floor profile before final fixing.

**CONSEIL!**

Plaque de pression doit être montée avant la pose finale.

Recommended number of bases / m	8mm+4PVB+8mm (88.4)		
	Glass height	Handrail	No. of bases / m
600mm	-		4
		F85-200	4
		F85-201	4
1000mm	-		5
		F85-200	4
		F85-201	4
1200mm	-		5
		F85-200	5
		F85-201	5
		L	

*The stated results are only indicative and do not guarantee the system's durability since they are not a result of a structural study*

# Type **A20u**

## In-floor Wedge System Système encastré en une-pièce

### Installation step by step / Etapes d'installation

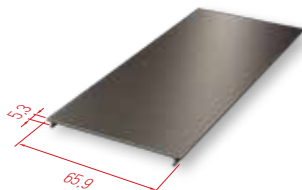


Profiles & accessories / Profilés & Accessoires



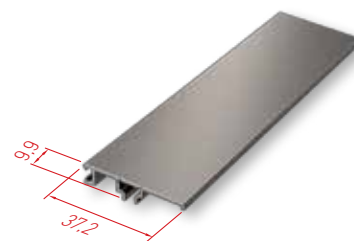
Slug gasket

Code	<b>US540-1PD</b>
Package	200 m



Cover for in-floor guide

Code	<b>F85-951</b>
Weight	235 gr/m
Length	6 m



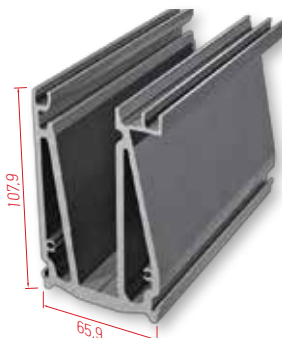
Base cover

Code	<b>F85-1K51</b>
Weight	216 gr/m
Length	6 m



Aluminium wedge

Code	<b>F85-455</b>
Package	20 pcs.



Drainase base

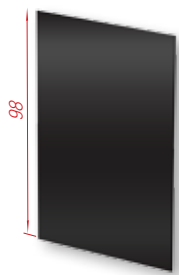
Code	<b>F85-460</b>
Length	3 m

\* Available in three meter pre-cut and pierced.  
Disponible en 3 metres percé



Pressure plate restrainer

Code	<b>F85-456</b>
Package	20 pcs.



PVC sheet 1.5mm

Code	<b>F85-459</b>
Color	Black
Length	2 m



PVC sheet 1.5mm

Code	<b>F85-458</b>
Color	Black
Length	2 m



Cap


Code	<b>F85-450</b>
Package	20 pcs.

## Type B


Adjustable system for on-floor installation  
Système réglable, pose sur dalle



### Adjustable on floor glass supporting system

 The additional use of a floor guide, on which the supporting bases can be quickly applied and perfectly aligned, makes the concept of this system evolutionary. Glass panels to be used are 88.4 and thickness of 17.52mm & 21.52mm, the maximum height is specified at maximum 1200mm.

### Système réglable, pose sur dalle

 Des possibilités de réglage absolument uniques rendent son montage encore plus simple mais robuste en même temps. Les bases de support se glissent sur le guide, ils s'y fixent, et les vitres sont montés et sérés. Dimensions de vitre préconisé a 88,4, a 17.52mm & 21.52mm d'épaisseur.







## Advantages

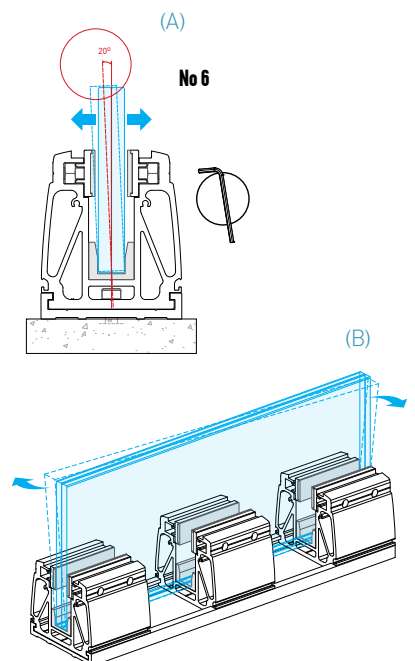


- unlimited view
- maximum security
- easy alignment
- additional floor guide
- additional pressure plates
- wide range of color choices (RAL, Sable, metallic, anodized & wood finish)
- optional use of top handrail

## Caracteristics



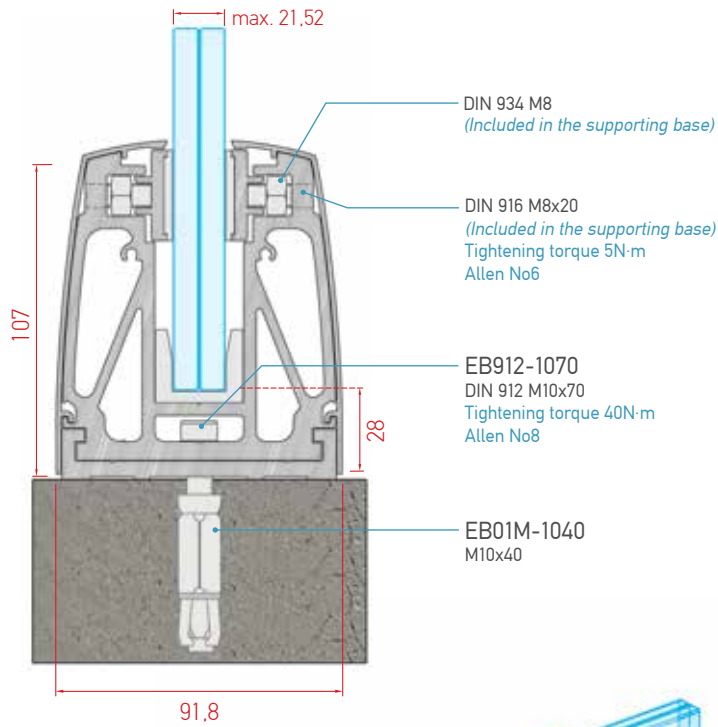
- Transparence illimitée
- Sécurité maximale
- Montage et alignement rapide et soigneux
- Guidage de sol
- Calles de pression
- Choix de coloris (RAL, Sable, anodize & teint de bois)
- Option de main courante



# Type B

Adjustable system for on-floor installation  
Système réglable, pose sur dalle

## Technical specifications / Specifications techniques



Glass section B	
16mm	20mm
Min. 16.76mm	Min. 20.76mm
Max. 17.52mm	Max. 21.52mm
Recommended glass	
17.52mm (8-1.52-8)	21.52mm (10-1.52-10)

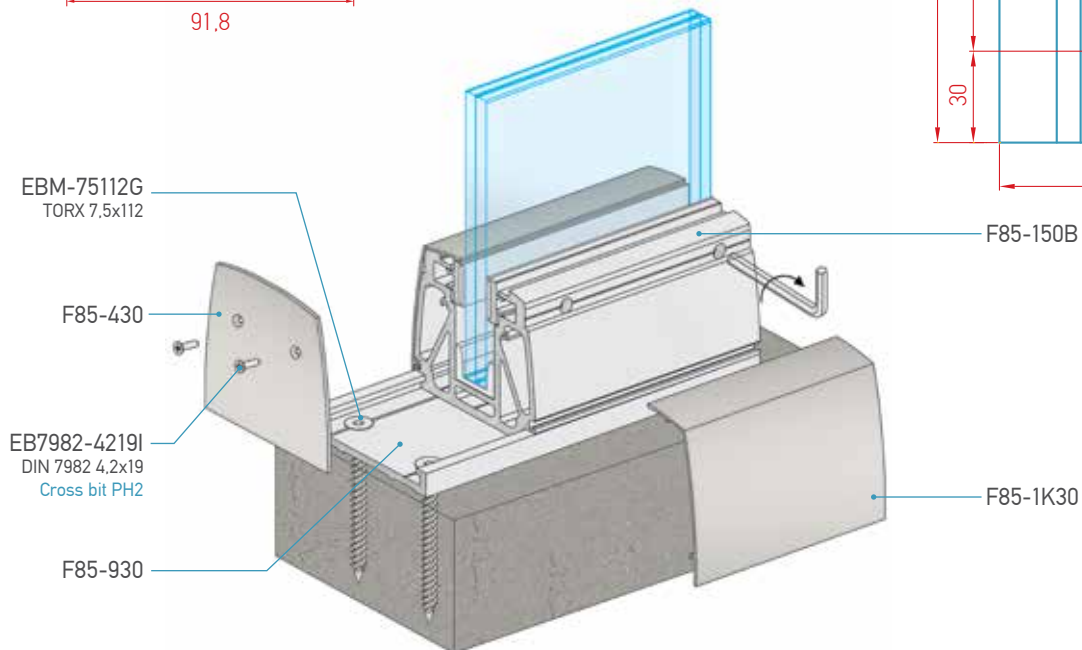
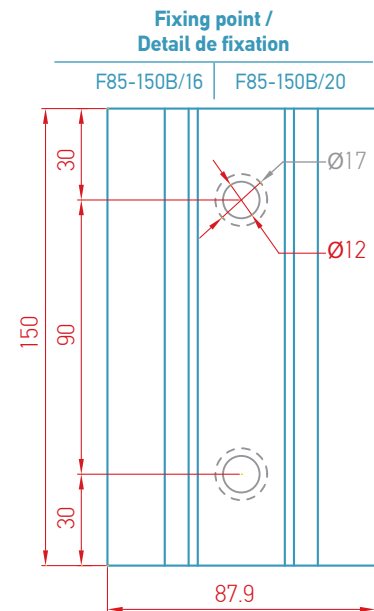


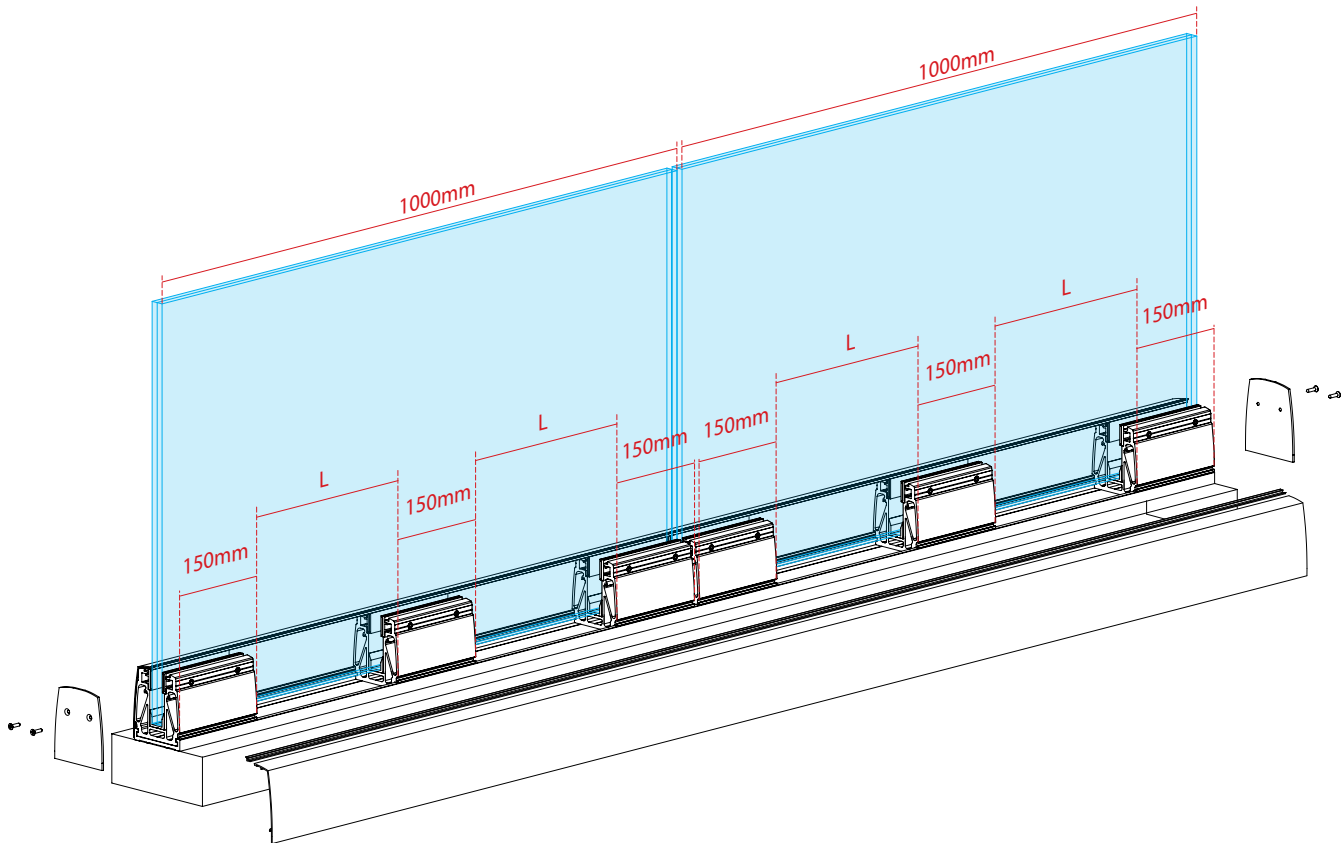
Table of system certifications

Type	Handrail	Type of glass	Type of membrane	Glass height	Linear load	Impact energy	Certification organization
B	F85-200	10+10mm LAMIN.	4x0.38mm PVB	1000mm	0.65 kN/m	600 J	Istituto Giordano

According to: NF P01-013:1988, NF P08-301:1991 | UNI 10807:1999

Supporting base assembly / Installation de Type B

Standard supporting base type B assembly for glasses with a length of 1000mm



Recommended number of bases / m	8mm+4PVB+8mm (88.4)			
	Height of glass	Handrail	No. of bases / m	L
600mm	-	-	3	275mm
	F85-200	F85-200	2	700mm
	F85-201	F85-201	2	700mm
1000mm	-	-	3	275mm
	F85-200	F85-200	3	275mm
	F85-201	F85-201	3	275mm
1100mm	-	-	4	133mm
	F85-200	F85-200	3	275mm
	F85-201	F85-201	3	275mm
1200mm	-	-	5	62.5mm
	F85-200	F85-200	4	133mm
	F85-201	F85-201	4	133mm

Recommended number of bases / m	10mm+4PVB+10mm (1010.4)			
	Glass Height	Handrail	No. of bases / m	L
600mm	-	-	3	275mm
	F85-200	F85-200	2	700mm
	F85-201	F85-201	2	700mm
1000mm	-	-	3	275mm
	F85-200	F85-200	3	275mm
	F85-201	F85-201	3	275mm
1100mm	-	-	4	133mm
	F85-200	F85-200	3	275mm
	F85-201	F85-201	3	275mm
1200mm	-	-	5	62.5mm
	F85-200	F85-200	4	133mm
	F85-201	F85-201	4	133mm

The stated results are only indicative and do not guarantee the system's durability since they are not a result of a structural study.

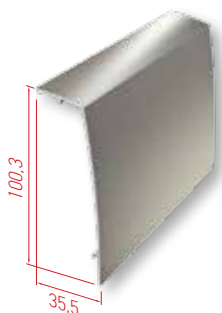
# Type B

Adjustable system for on-floor installation  
Système réglable, pose sur dalle

## Installation step by step / Etapes d'installation

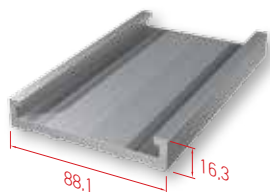


Profiles & accessories / Profilés & Accessoires



Base cover

Code	<b>F85-1K30</b>
Weight	559 gr/m
Length	6 m



Base guide

Code	<b>F85-930</b>
Weight	1565 gr/m
Length	6 m

Available in ral 9006 /  
Disponible en Ral 2006



Cap

Code	<b>F85-430</b>
Package	20 pcs.



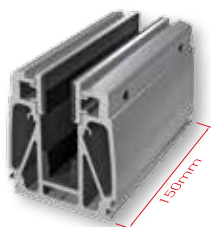
Cap

Code	<b>F85-430L*</b> <b>F85-430M**</b>
Package	20 pcs.

\* 8mm+4PVB+8mm  
\*\* 10mm+4PVB+10mm

Glass supporting bases / Base de support

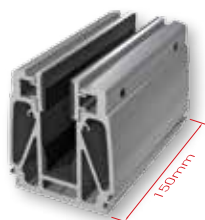
The supporting bases include tightening screws, chock gaskets, gaskets and pressure plates



Glass base

Code	<b>F85-150B/16*</b>
Package	12 pcs.

\* 8mm+4PVB+8mm



Glass base

Code	<b>F85-150B/20**</b>
Package	12 pcs.

\*\* 10mm+4PVB+10mm



Slug gasket\*

Code	<b>F85-434</b>
Length	250m


\*The use of a special slug gasket is necessary only when installing a 8mm+4PVB+8mm glass.

# Type C2 On-Floor System


Pose sur dalle



## On-Floor System

 Frameless glass offers a seamless and stylish appearance which is unmatched by any other product. For a sleek and unobtrusive look, Type C2 is the undisputable solution. The square line supporting bases are fixed on the ground profile and covered by fascia profiles, easy to remove in case of glass replacement. Glass panels specified for this system are: 88.4, 1010.4, thickness of 17.52 & 21.52mm. maximum height at 1200mm.

## Pose sur dalle

 Conçue pour répondre aux critères de sécurité les plus strictes, en usage résidentiel ou commercial tel que halles, salles de loisir et centre commerciaux. Les verres sont d'une épaisseur déterminée selon l'emploi, allant de 88,4 à 1010,4, épaisseur de 17,52 & 21,52, et hauteur 1200mm.



## Advantages



- Seamless and stylish appearance
- Complies to the strictest safety measures ( test results available)
- Practical alignment from internal side of balcony
- Quick installation with a floor guide
- Possibility of embedding the system
- Optional use of handrail.
- Wide range of colors – RAL, Sable, anodized & wood imitation

## Caracteristics



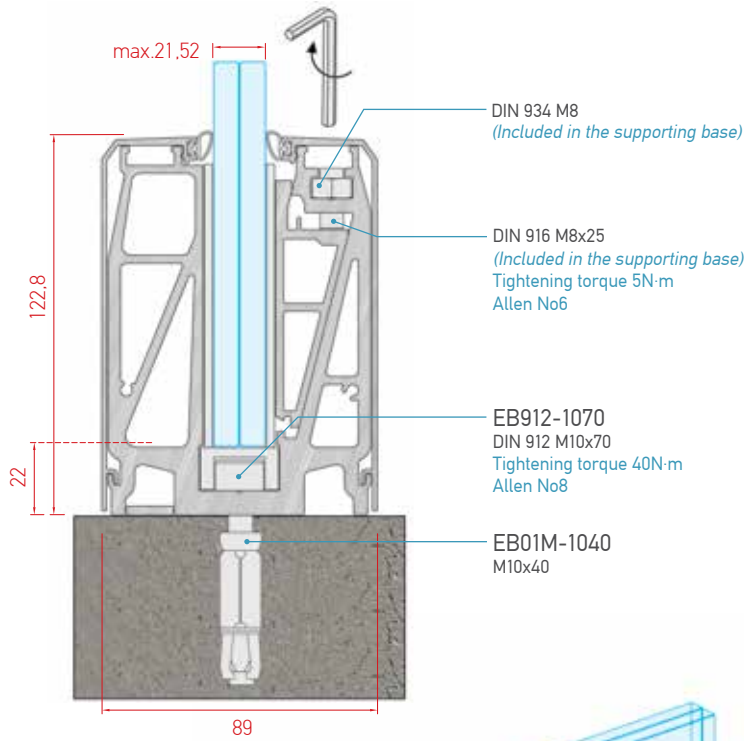
- Transparent
- Certifie par IFT Rosenheim
- Aligement aisé
- Option d' encastrement
- Option de main courante
- Choix de coloris - RAL, Sable, anodise brosse



# Type C2

On-floor system  
Pose sur dalle

## Technical specifications / Specifications techniques



Glass section C2	
16mm	20mm
Min. 16.76mm	Min. 20.76mm
Max. 17.52mm	Max. 21.52mm
Recommended glass	
17.52mm (8-1.52-8)	21.52mm (10-1.52-10)

### Fixing point / Detail de fixation

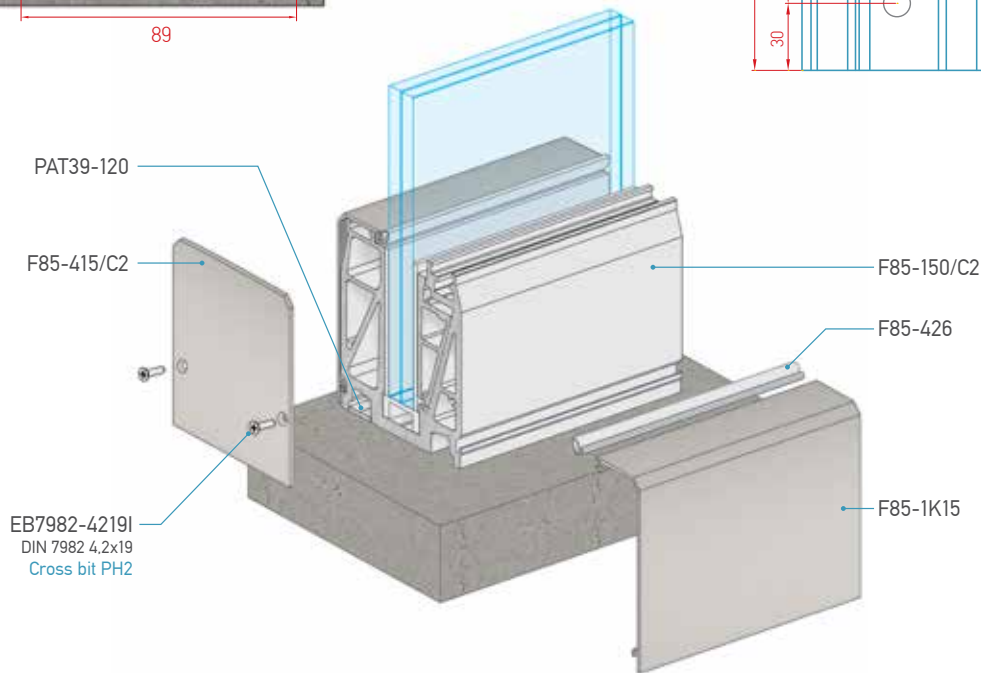
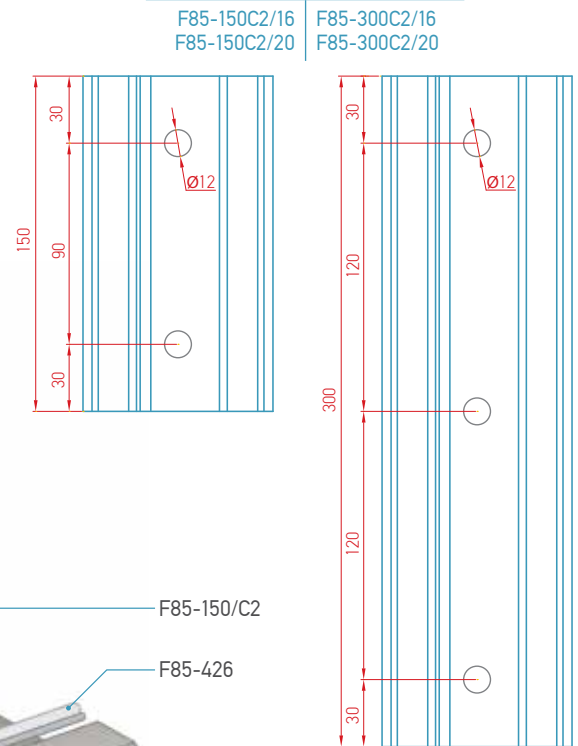


Table of system certifications

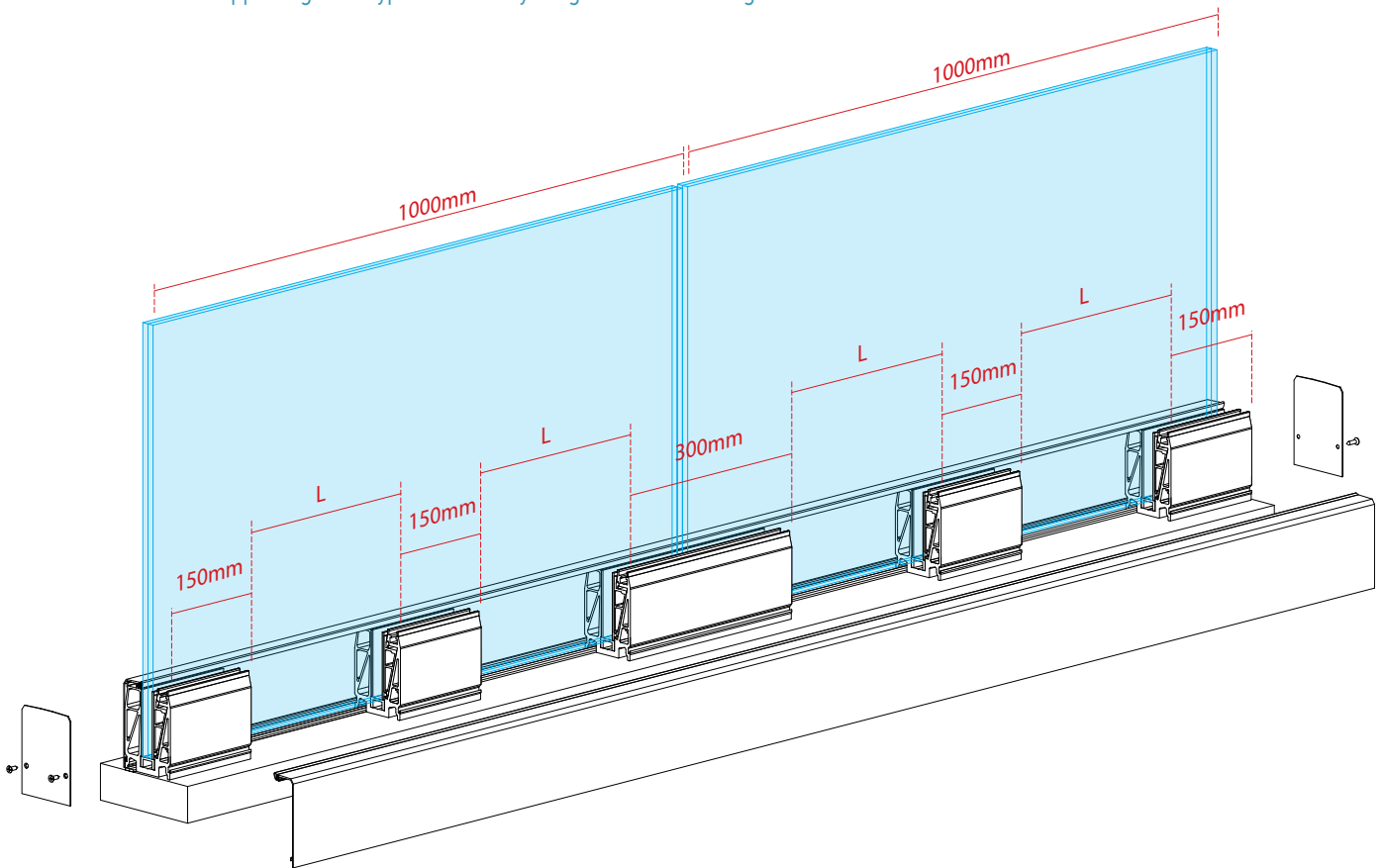
Type	Handrail	Type of glass	Type of membrane	Glass height	Linear load	Impact energy	Certification organization
C	F85-201	8+8mm LAMIN.	4x0.38mm PVB	1000mm	1.70 kN/m	600 J	Istituto Giordano**
C	-	10+10mm LAMIN.	4x0.38mm PVB	1200mm	-	442 J	IFT Rosenheim*

According to: \*TRAV 2003-01 | \*\*NF P01-013:1988, NF P08-301:1991 | \*\*UNI 10807:1999



Supporting base assembly / Installation de Type C

Standard supporting base type C assembly for glasses with a length of 1000mm



Type C2 Glass Supporting System

Recommended number of bases / m	8mm+4PVB+8mm (88.4)			
	Glass height	Handrail	No. of bases / m	L
600mm	-	-	3	275mm
	F85-200	-	2	700mm
	F85-201	-	2	700mm
1000mm	-	-	3	275mm
	F85-200	-	3	275mm
	F85-201	-	3	275mm
1100mm	-	-	4	133mm
	F85-200	-	3	275mm
	F85-201	-	3	275mm
1200mm	-	-	5	62,5mm
	F85-200	-	4	133mm
	F85-201	-	4	133mm

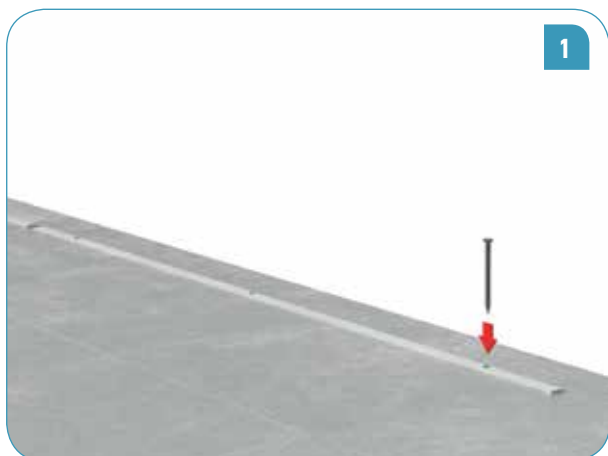
Recommended number of bases / m	10mm+4PVB+10mm (1010.4)			
	Glass height	Handrail	No. of bases / m	L
600mm	-	-	3	275mm
	F85-200	-	2	700mm
	F85-201	-	2	700mm
1000mm	-	-	3	275mm
	F85-200	-	3	275mm
	F85-201	-	3	275mm
1100mm	-	-	4	133mm
	F85-200	-	3	275mm
	F85-201	-	3	275mm
1200mm	-	-	5	62,5mm
	F85-200	-	4	133mm
	F85-201	-	4	133mm

The stated results are only indicative and do not guarantee the system's durability since they are not a result of a structural study.

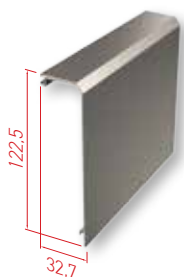
# Type C2

On-floor system  
Pose sur dalle

## Installation step by step / Etapes d'installation



Profiles & accessories / Profilés & Accessoires



Base cover

Code	<b>F85-1K15</b>
Weight	705 gr/m
Length	6 m



Cap

Code	<b>F85-415/C2</b>
Package	20 pcs.



Cap

Code	<b>F85-415/C2 L*</b> <b>F85-415/C2 M**</b>
Package	20 pcs.

\* 8mm+4PVB+8mm  
\*\* 10mm+4PVB+10mm



Alignment profile

Code	<b>PAT39-120</b>
Weight	121 gr/m
Length	6 m



Rubber gasket for base cover

Code	<b>F85-426</b>
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Supporting base / Base de support

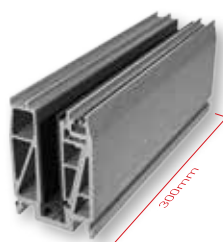
The support bases include tightening screws and gaskets. Type C bases are used in the in-floor and on-floor glass support system.



Glass base

Code	<b>F85-150C2/16*</b> <b>F85-150C2/20**</b>
Package	12 pcs.

\* 8mm+4PVB+8mm  
\*\* 10mm+4PVB+10mm



Glass base

Code	<b>F85-300C2/16*</b> <b>F85-300C2/20**</b>
Package	6 pcs.


\* 8mm+4PVB+8mm  
\*\* 10mm+4PVB+10mm

Type **C2u** In-floor support system  
Système Encastré






## In-floor support system

 Glass balustrades are unmatched for their ability to bring safety, visual appeal and practicality to any internal or external space. Type C2U offers all of these qualities and even more, in its "hidden" in-floor assembly. Suitable for swimming pools or any terrace where no barriers to the feeling of freedom are welcomed. Glass panels to be used are 88.4 or 1010.4, in thickness of 17.52 & 21.52, maximum height of 1200mm.

## Système Encastré

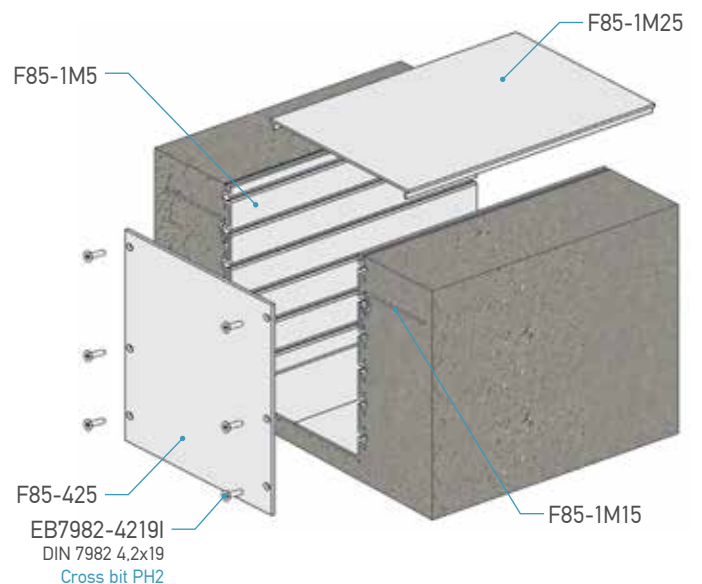
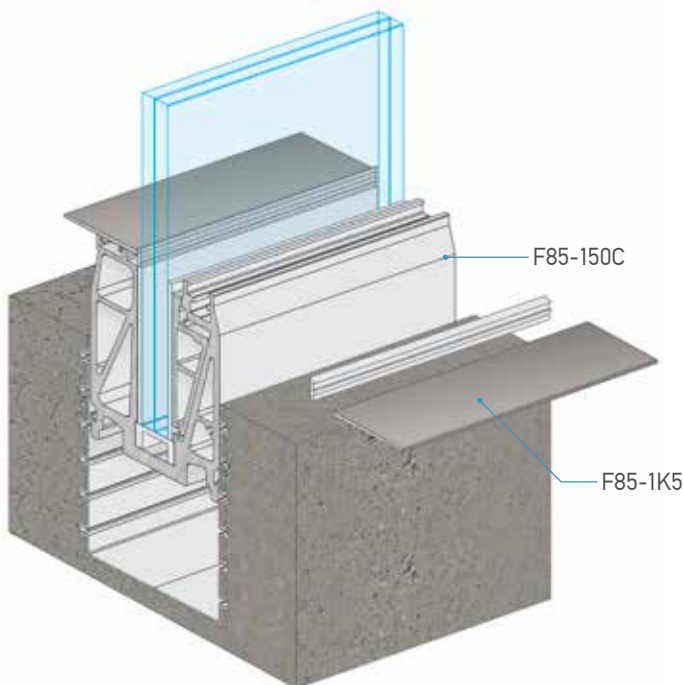
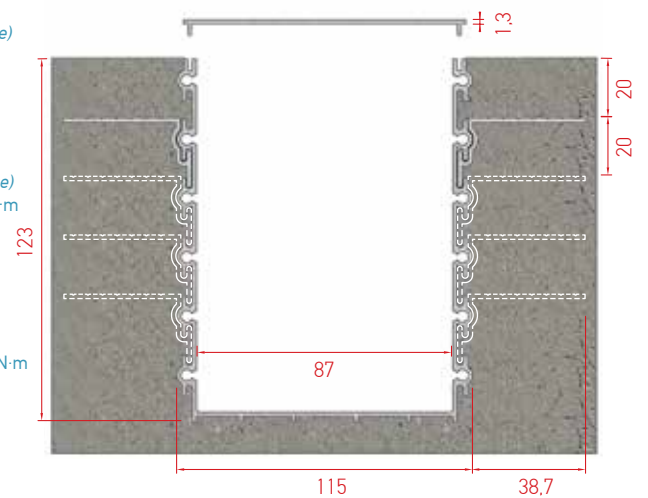
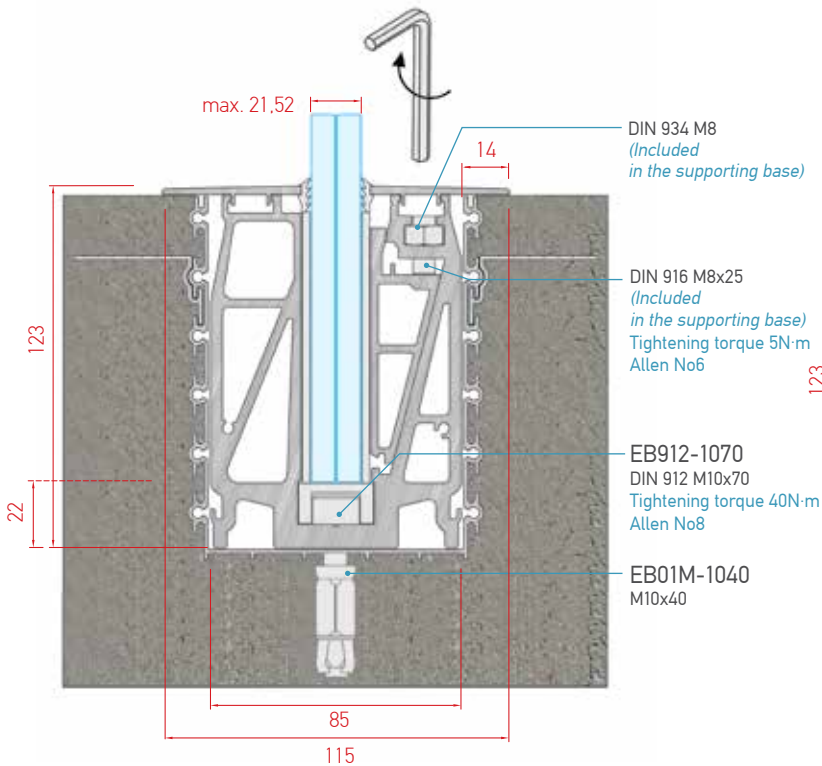
 La vie en Verre! Le profile de sol et les bases de support sont totalement encastrés dans le béton. L'ensemble est bien protégé par un capuchon en profile et joints PVC. La vitre préconisé est 88.4 ou 1010.4, épaisseur a 17.52 et hauteur maximale a 1200mm.

# Type C2u

## In-floor support system Système Encastré

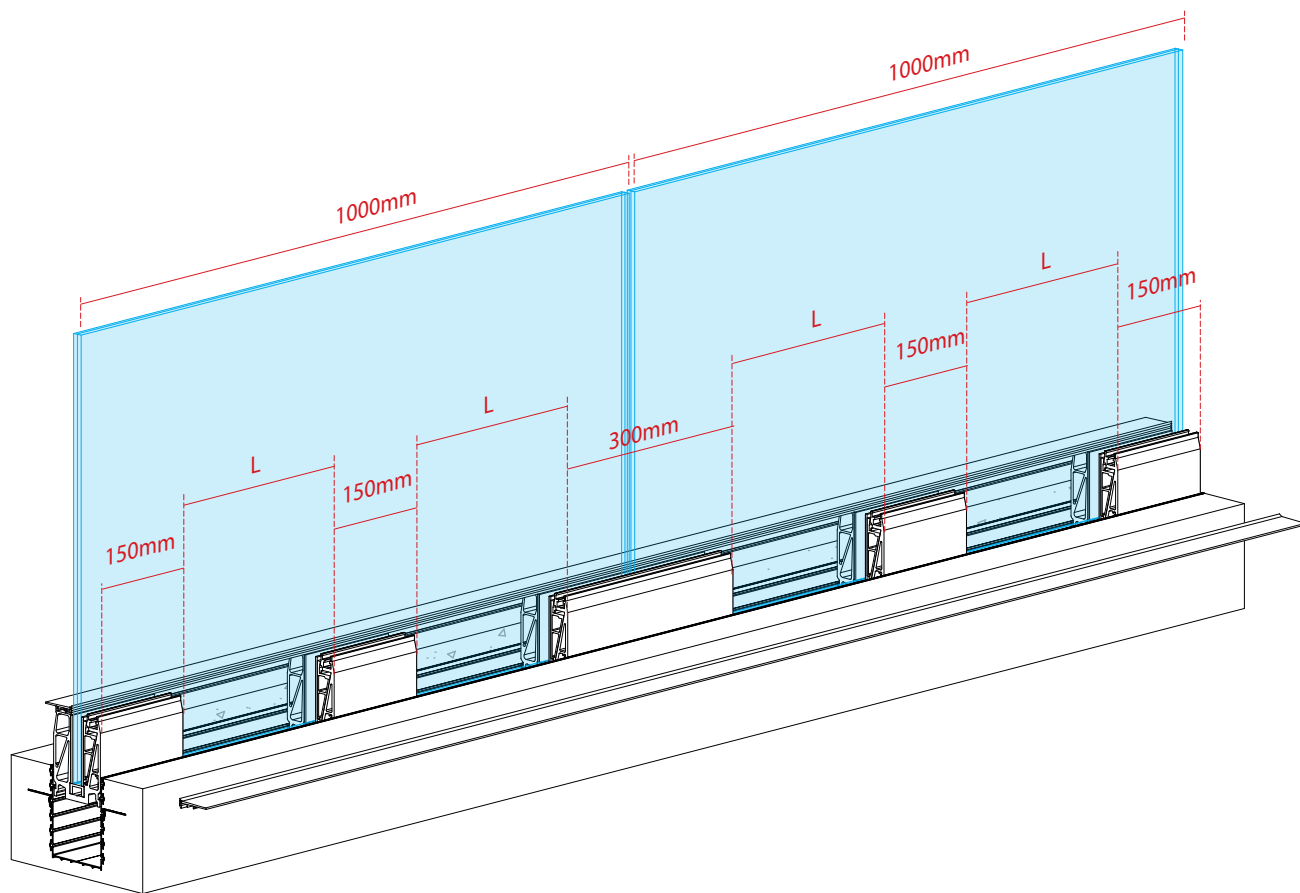
### Technical specifications / Specifications techniques

Glass section C2u	
16mm	20mm
Min. 16.76mm	Min. 20.76mm
Max. 17.52mm	Max. 21.52mm
Recommended glass	
17.52mm (8-1.52-8)	21.52mm (10-1.52-10)



Supporting base assembly / Installation de Type Cu

Standard supporting base type Cu assembly for glasses with a length of 1000mm



Type C2u Glass Supporting System

Recommended number of bases / m	8mm+4PVB+8mm (88.4)			
	Height height	Handrail	No. of bases / m	L
600mm	-	-	3	275mm
	F85-200	-	2	700mm
	F85-201	-	2	700mm
1000mm	-	-	3	275mm
	F85-200	-	3	275mm
	F85-201	-	3	275mm
1100mm	-	-	4	133mm
	F85-200	-	3	275mm
	F85-201	-	3	275mm
1200mm	-	-	5	62,5mm
	F85-200	-	4	133mm
	F85-201	-	4	133mm

Recommended number of bases / m	10mm+4PVB+10mm (1010.4)			
	Height height	Handrail	No. of bases / m	L
600mm	-	-	3	275mm
	F85-200	-	2	700mm
	F85-201	-	2	700mm
1000mm	-	-	3	275mm
	F85-200	-	3	275mm
	F85-201	-	3	275mm
1100mm	-	-	4	133mm
	F85-200	-	3	275mm
	F85-201	-	3	275mm
1200mm	-	-	5	62,5mm
	F85-200	-	4	133mm
	F85-201	-	4	133mm

The stated results are only indicative and do not guarantee the system's durability since they are not a result of a structural study.

# Type C2u

## In-floor support system Système Encastré

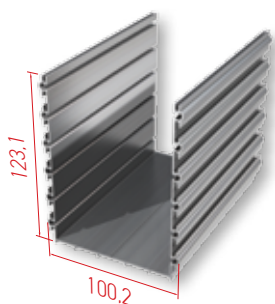
### Installation step by step / Etapes d'installation





**Profile & accessories of in-floor guide / Profilés et fixations**

*Supporting bases are supplied with screws and gaskets. Bases compatible with C2u*



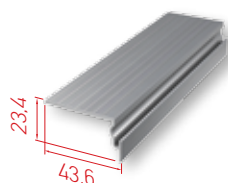
In-floor base guide

Code	<b>F85-1M5</b>
Weight	1976 gr/m
Length	6 m



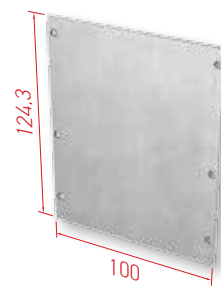
In-floor base guide cover

Code	<b>F85-1M25</b>
Weight	360 gr/m
Length	6 m



Additional profile for in-floor guide

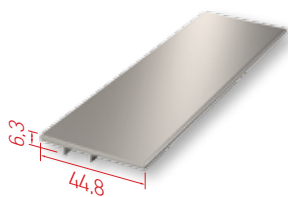
Code	<b>F85-1M15</b>
Weight	281 gr/m
Length	6 m



In-floor base guide cap

Code	<b>F85-425</b>
Package	20 pcs.

**Profiles & accessories / Profilés & Accessoires**



Base cover

Code	<b>F85-1K5</b>
Weight	295 gr/m
Length	6 m

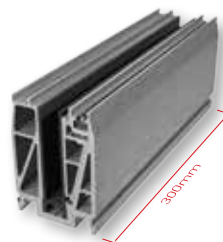
**Supporting bases / Base de support**



Glass base

Code	<b>F85-150C2/16*</b> <b>F85-150C2/20**</b>
Package	12 pcs.

\* 8mm+4PVB+8mm  
\*\* 10mm+4PVB+10mm



Glass base

Code	<b>F85-300C2/16*</b> <b>F85-300C2/20**</b>
Package	6 pcs.


\* 8mm+4PVB+8mm  
\*\* 10mm+4PVB+10mm

## Type D

Fascia mount system  
Pose sur nez de dalle




### Fascia mount system

 Glass panels mounted on aluminium fascia supporting channel, suitable for balconies, terraces and staircases. Extremely elegant and unobtrusive due to the covering profiles and rosettes which support the whole structure. Specified glass to be used is 88.4 & 1010.4, in thickness of 17.52 & 21.52 respectively. Maximum height at 1200mm.

### Advantages

- Total frameless effect
- Suitable for internally or externally
- Mounted on external side of wall
- Optional use of handrail
- No drilling or damage of insulation

### Pose sur nez de dalle

 Plus facile que jamais, avec ce système de pose en appliqué ( nez de dalle ). Le profile structuraux se fixe sur le mur et le verre est monte avec des adaptateurs de verre. L'habillage de l'ensemble donne ce garde corps son élégance et.


### Caracteristics

- Effet tout verre
- Utilisable a l'intérieur et extérieur
- Ergonomie d'espace
- Option de main courant
- Protection d'isolation thermique




## Type Ds

External support with glass brackets  
Pose sur nez de dalle avec des adaptateurs a verre

 Installing this system on your staircase or balcony, a floating and totally frameless effect is gained.

The glass brackets in stainless steel of 40 and 50 diameter, are fixed directly on the external wall. Additional brackets available for use of handrail.

 Pour avoir de transparence sans limites! Ce garde corps tout verre, sans structure porteuse, s'inscrit dans une tendance architecturale forte. Les adaptateurs a verre rond a 40 & 50 en inox brosse, offrent la structure la robustesse et la beauté a la fois.

### Advantages

- Perfect solution for staircases
- Stunning look
- Easy installation with 88.4 or 1010.4 securit glass

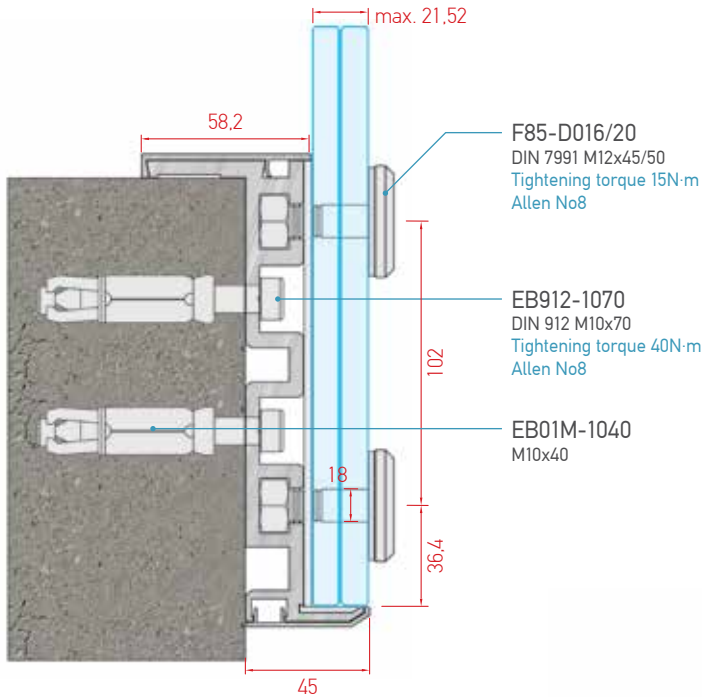
### Characteristics

- Effet tout verre
- Esthétique luxueuse
- Facile a monter de verre a 88.4 ou 1010.4 securit glass

# Type D

## Fascia mount system Pose sur nez de dalle

### Technical specifications / Specifications techniques



Glass section D	
16mm	20mm
Min. 16.76mm	Min. 20.76mm
Max. 17.52mm	Max. 21.52mm
Recommended glass	
17.52mm (8-1.52-8)	21.52mm (10-1.52-10)

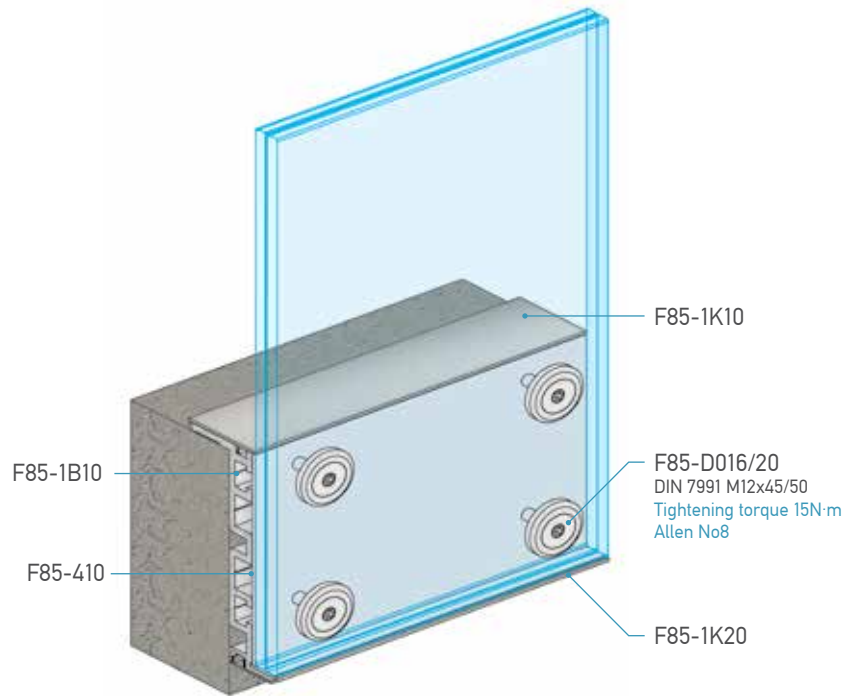
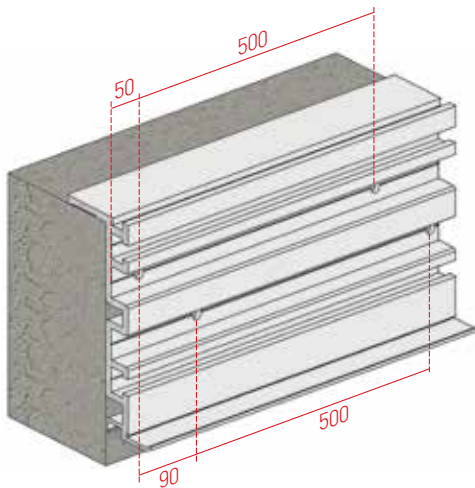
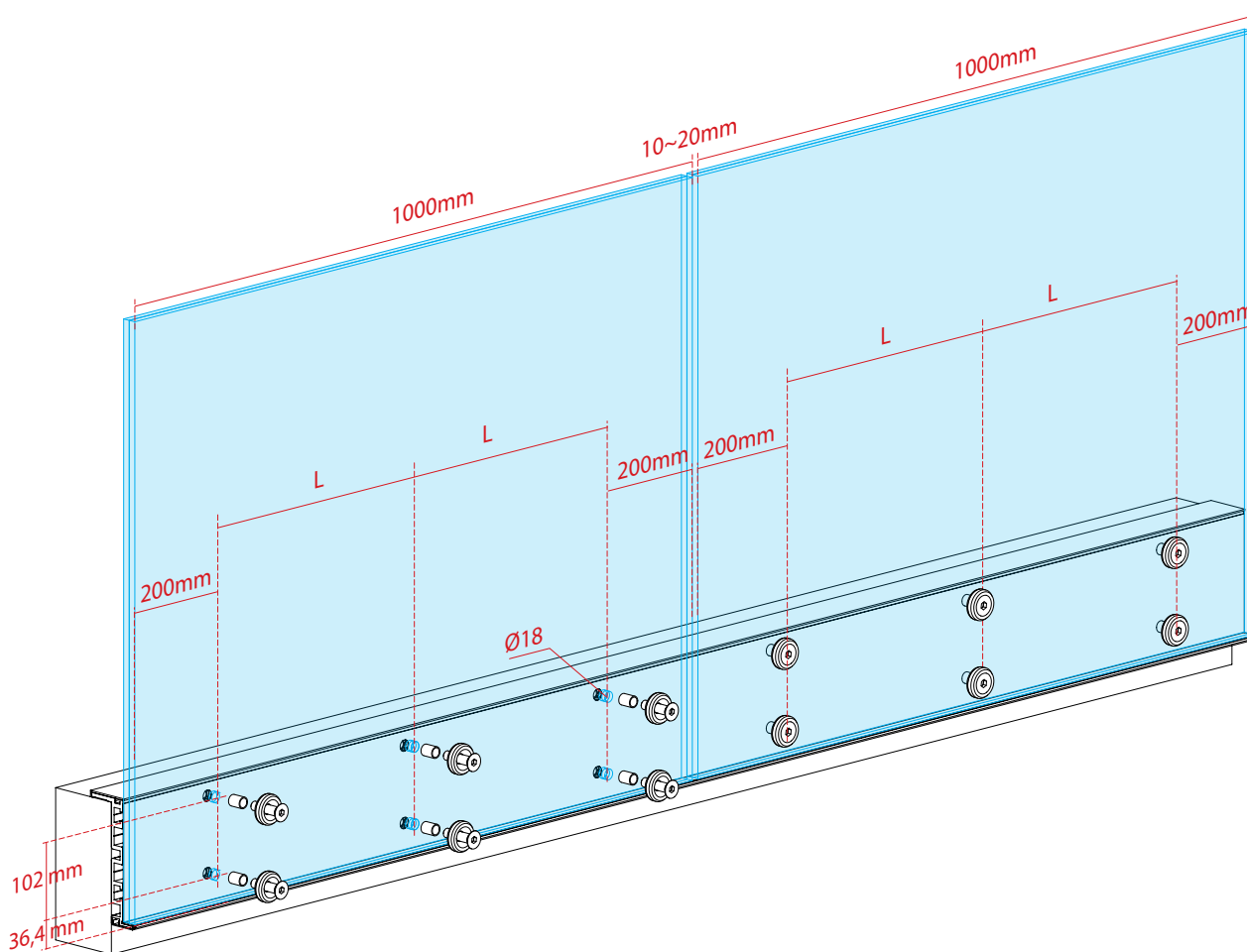


Table of system certifications

Type	Handrail	Type of glass	Type of membrane	Glass height	Linear load	Impact energy	Certification organization
D	F50-200	8+8mm LAMIN.	2x0.38mm PVB	1000mm	1.70 kN/m	600 J	Istituto Giordano

According to: NF P01-013:1988, NF P08-301:1991 | UNI 10807:1999

Supporting base assembly / Installation de Type D



Recommended number of bases / m	8mm+4PVB+8mm (88.4)			
	Height height	Handrail	No. of bases / m	L
600mm	-	-	2	600mm
	F50-200	-	2	600mm
1000mm	-	-	3	300mm
	F50-200	-	2	600mm
1200mm	-	-	4	200mm
	F50-200	-	3	300mm

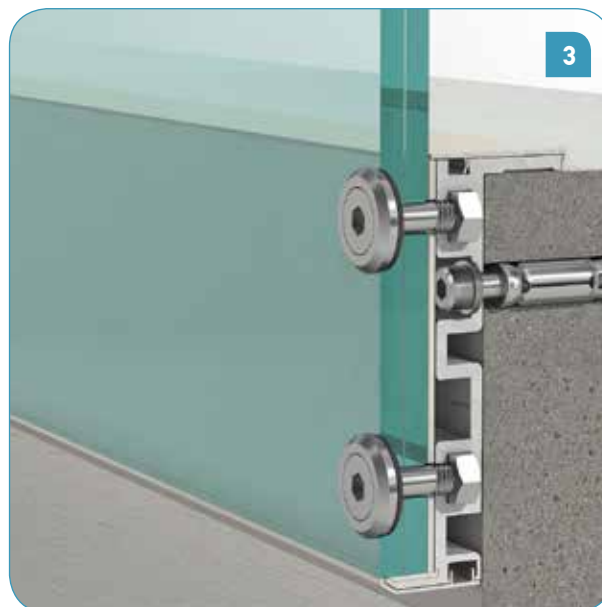
Recommended number of bases / m	10mm+4PVB+10mm (1010.4)			
	Height height	Handrail	No. of bases / m	L
600mm	-	-	2	600mm
	F50-200	-	2	600mm
1000mm	-	-	3	300mm
	F50-200	-	2	600mm
1100mm	-	-	4	200mm
	F50-200	-	3	300mm

The stated results are only indicative and do not guarantee the system's durability since they are not a result of a structural study.

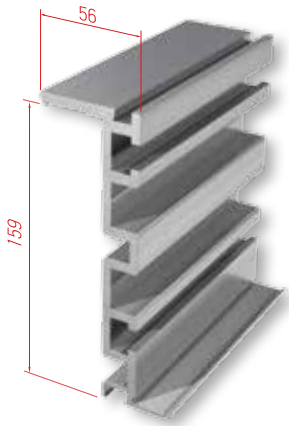
# Type D

Fascia mount system  
Pose sur nez de dalle

## Installation step by step / Etapes d'installation

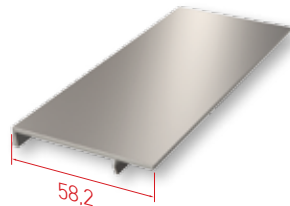


Profiles & accessories / Profilés & Accessoires



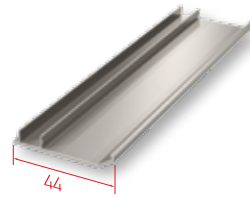
Wall base

Code	<b>F85-1B10</b>
Weight	4740 gr/m
Length	6 m



Top Cover

Code	<b>F85-1K10</b>
Weight	366 gr/m
Length	6 m



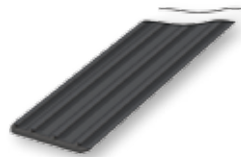
Bottom Cover

Code	<b>F85-1K20</b>
Weight	220 gr/m
Length	6 m



PVC sheet 1mm

Code	<b>F85-410</b>
Color	White/Black
Length	2 m



Base gasket

Code	<b>F85-437</b>
Length	200 m



Glass Support Knurl  
(Inox304)

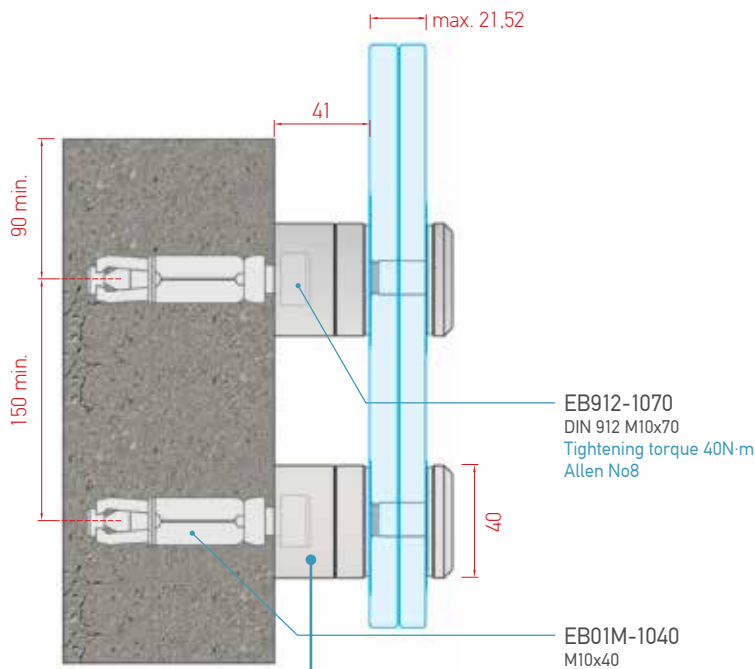
Code	<b>F85-D016*</b> <b>F85-D020**</b>
Package	20 pcs.

\* 8mm+4PVB+8mm  
\*\* 10mm+4PVB+10mm

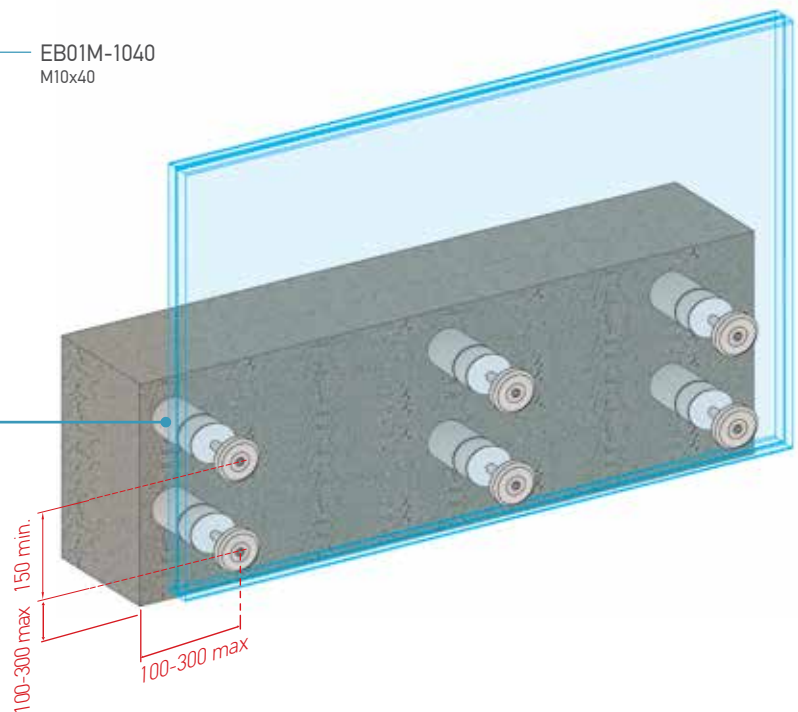
# Type Ds

## External support with glass brackets Pose sur nez de dalle avec des adaptateurs a verre

### Technical specifications / Specifications techniques



Glass section Ds	
<b>16mm</b>	<b>20mm</b>
Min. 16.76mm	Min. 20.76mm
Max. 17.52mm	Max. 21.52mm
Recommended glass	
17.52mm (8-1.52-8)	21.52mm (10-1.52-10)



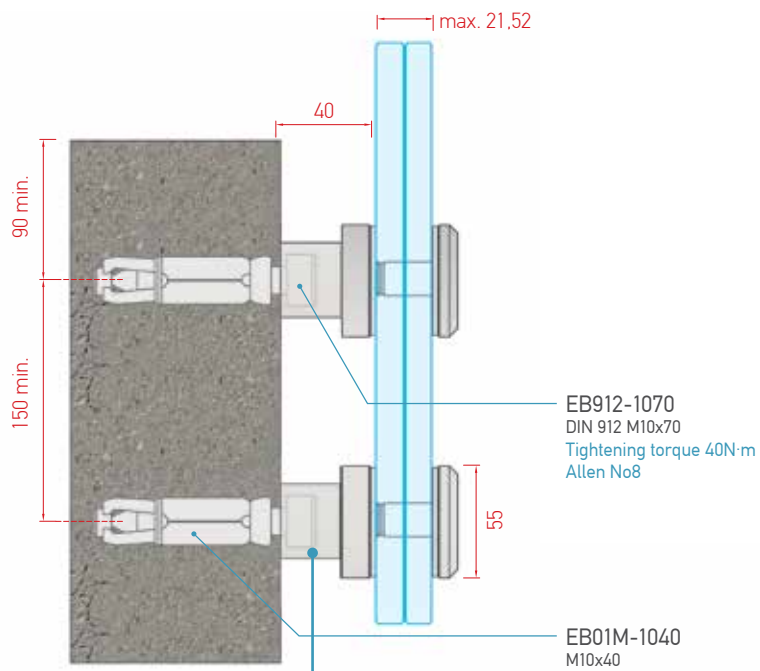
**Note:**  
Interconnection of glasses using a handrail (with a 4148 or F85-451 support) improves the static performance

**Conseil:**  
L' utilisation se main courante offre de meilleure performance static

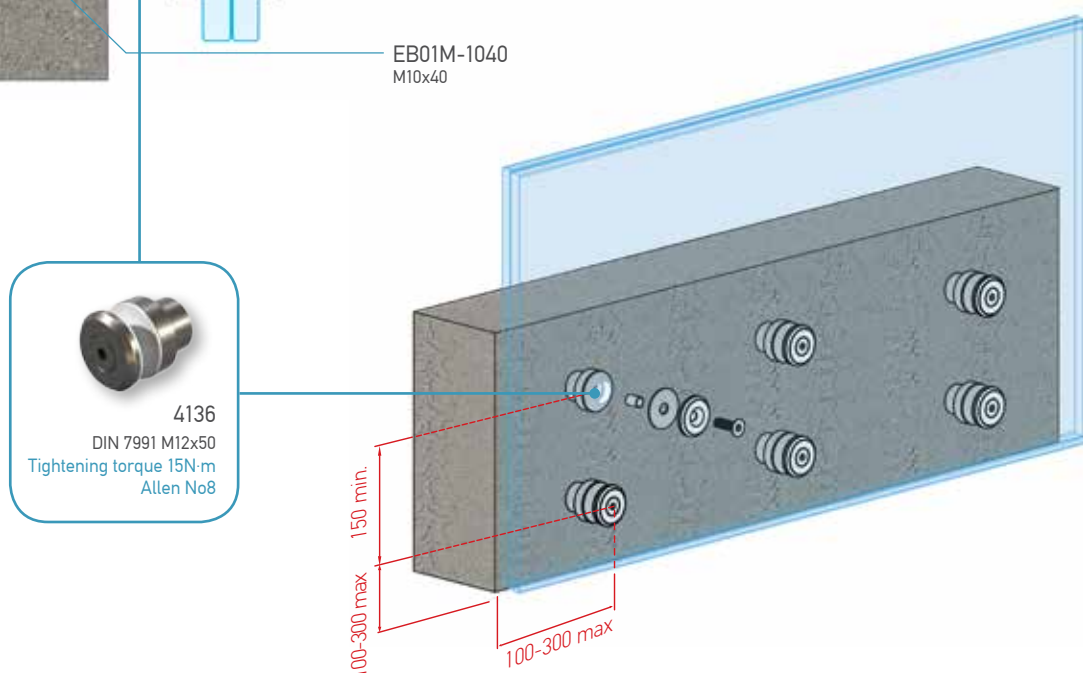
Table of system certifications							
Type	Handrail	Type of glass	Type of membrane	Glass height	Linear load	Impact energy	Certification organization
Ds	F50-200	8+8mm LAMIN.	4x0,38mm PVB	1000mm	1.70 kN/m	600 J	Istituto Giordano

According to: NF P01-013:1988, NF P08-301:1991 | UNI 10807:1999





Glass section Ds	
16mm	20mm
Min. 16.76mm	Min. 20.76mm
Max. 17.52mm	Max. 21.52mm
Recommended glass	
17.52mm (8-1.52-8)	21.52mm (10-1.52-10)



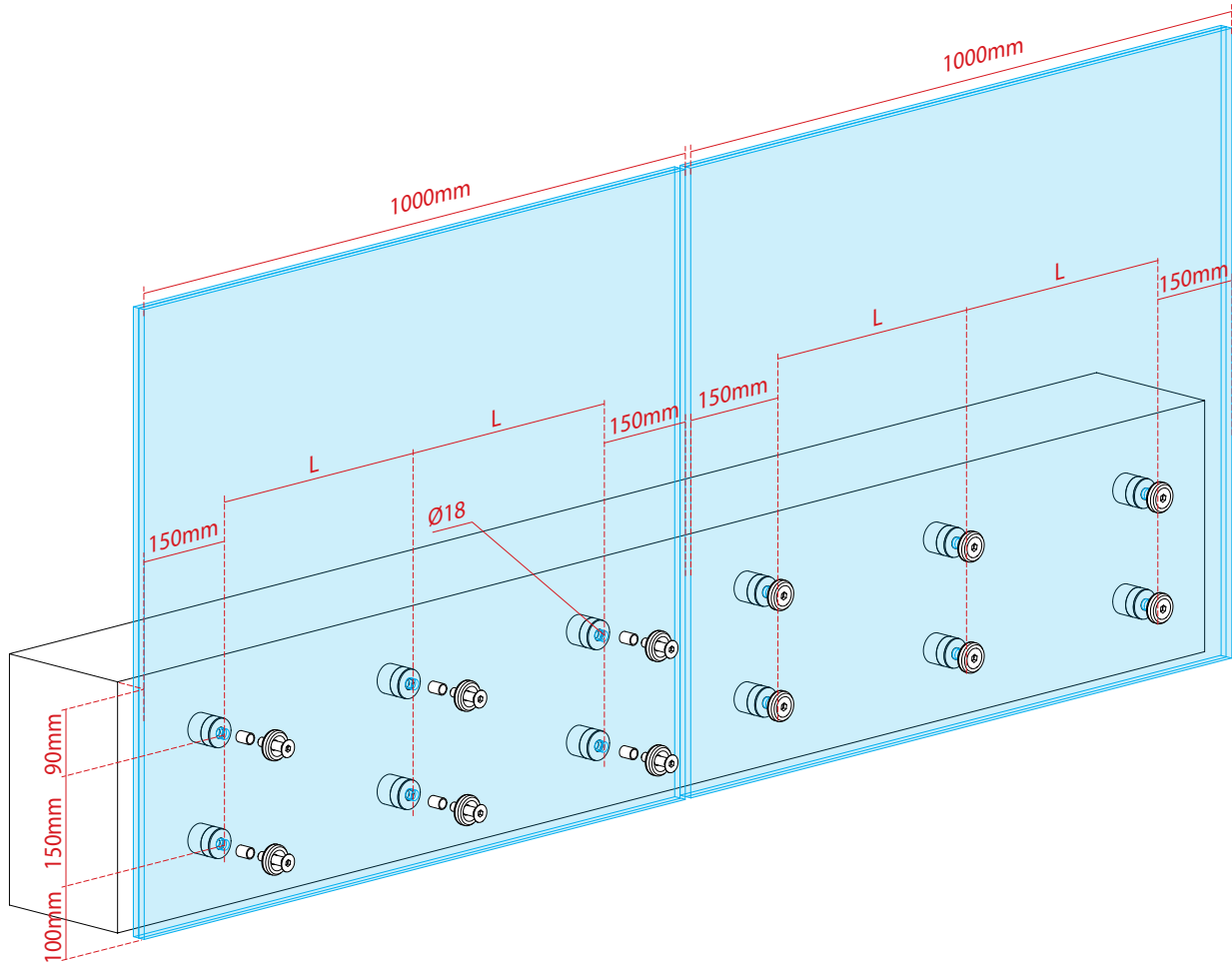
**Note:**  
Interconnection of glasses using a handrail (with a 4148 or F85-451 support) improves the static performance

**Conseil:**  
L' utilisation se main courante offre de meilleure performance static

# Type Ds

External support with glass brackets  
Pose sur nez de dalle avec des adaptateurs a verre

Supporting base assembly / Installation de Type Ds

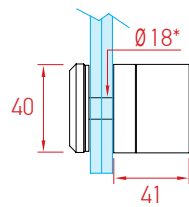


Recommended number of bases / m	8mm+4PVB+8mm (88.4)			
	Height height	Handrail	No. of bases / m	L
600mm	-	-	3	350mm
	F50-200	-	2	700mm
1000mm	-	-	3	350mm
	F50-200	-	3	350mm
1200mm	-	-	4	233mm
	F50-200	-	3	350mm

Recommended number of bases / m	10mm+4PVB+10mm (1010.4)			
	Height height	Handrail	No. of bases / m	L
600mm	-	-	3	350mm
	F50-200	-	2	700mm
1000mm	-	-	3	350mm
	F50-200	-	3	350mm
1100mm	-	-	4	233mm
	F50-200	-	3	350mm

The stated results are only indicative and do not guarantee the system's durability since they are not a result of a structural study

Inox accessories / Viserie et rosettes en inox

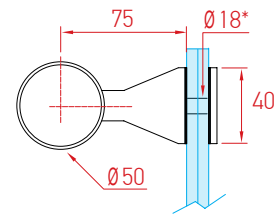


\*glass hole

INOX glass support

Code	<b>4149-200*</b> (Inox304) <b>4149-201*</b> (Inox316)
Package	12 pcs. (box) 4 pcs. (blister)

\* 8mm+4PVB+8mm  
10mm+4PVB+10mm

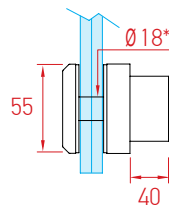


\*glass hole

Handrail support F50-200

Code	<b>4148-200*</b> (Inox304) <b>4148-201*</b> (Inox316)
Package	12 pcs. (box) 4 pcs. (blister)

\* 8mm+4PVB+8mm  
10mm+4PVB+10mm



\*glass hole

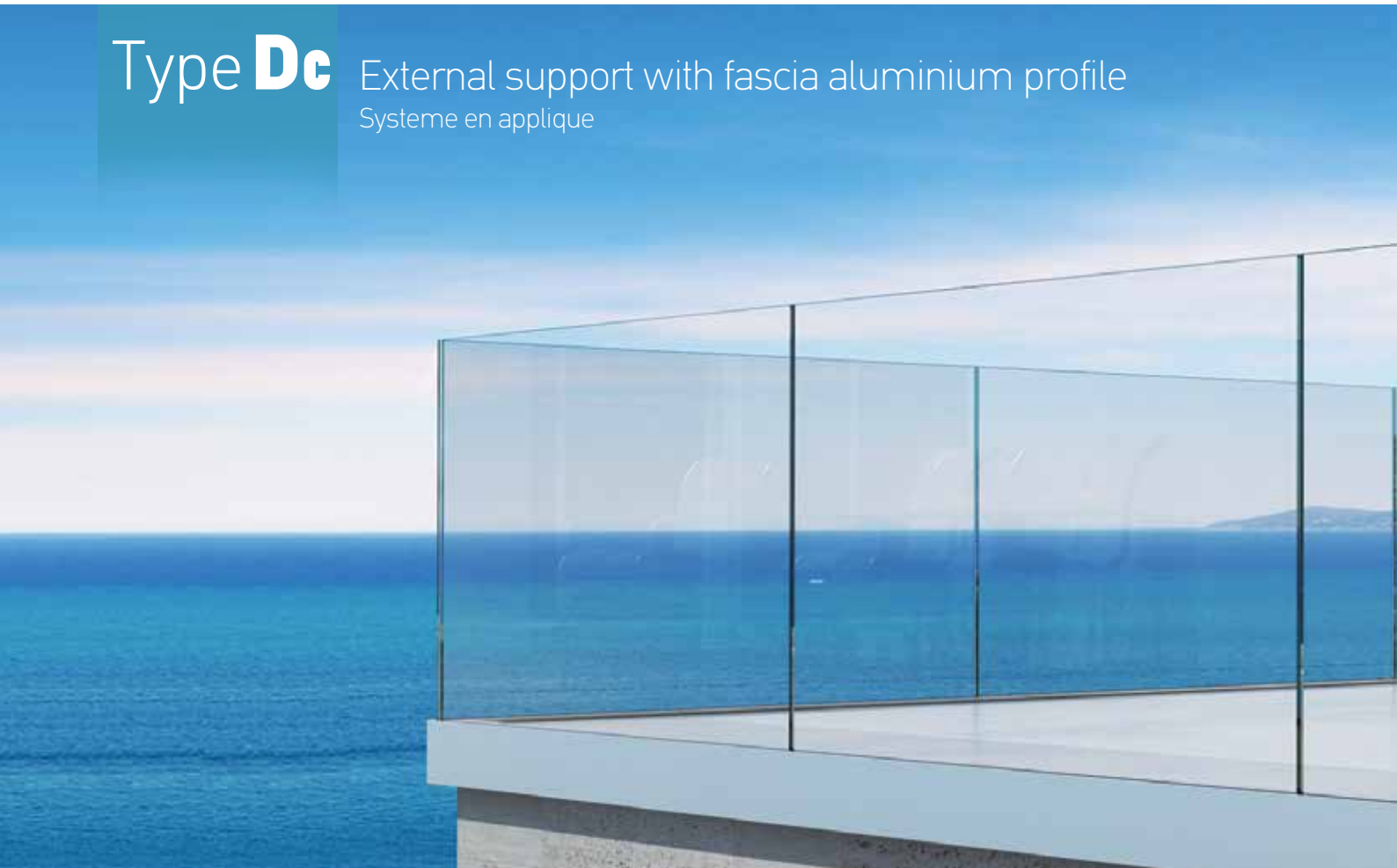
INOX glass support

Code	<b>4136-200*</b> (Inox316)
Package	12 pcs. (box) 4 pcs. (blister)


\* 8mm+4PVB+8mm  
10mm+4PVB+10mm

# Type Dc

External support with fascia aluminium profile  
Système en applique




## External support with fascia aluminium profile

 In this version the supporting profiles are totally covered by aluminium profiles, giving a unique and seamless look. Can be mounted with 88.4 and 1010.4 glass in thickness of 17.52 & 21.52 respectively. Maximum height specified at 1200mm.

### Advantages

- Floating effect
- Possibility of mounting the glass without any drilling
- External fascia mounting
- No damage to installation
- Choice of finishes: RAL, Sable & anodised

## Système en applique

 Ce type de Crystalline offre une solution pratique et esthétique grâce à la pose sur nez de dalle et son habillage avec les profils en aluminium.  
Le verre spécifié est de 88.4 & 1010.4 et épaisseur de 17.52 & 21.52 respectivement. Hauteur maximale à 1200mm.

### Caracteristics


- Effet tout verre
- Pas de perçage
- Habillage par aise
- Choix de coloris




## Type **Dc** No Drill

Evolutionary concept of external fascia mounting, without any drilling on the glass panels

Conception révolutionnaire sans percer le verre!

 The newest entry in the frameless glass systems, allowing the mounting of the glass on aluminium profile guide and brackets. maximum height of glass must not exceed 100cm

 Ce type de garde corps extérieur très design, se caractérise par le verre transparent, épais, maintenue par de fixations en aluminium profile.

La main courante en aluminium anodise brosse, ici optionnelle vient couronner l'ensemble de cette réalisation.

### Advantages

- Minimal and seamless design
- Limitless view
- Easy installation
- No drilling required

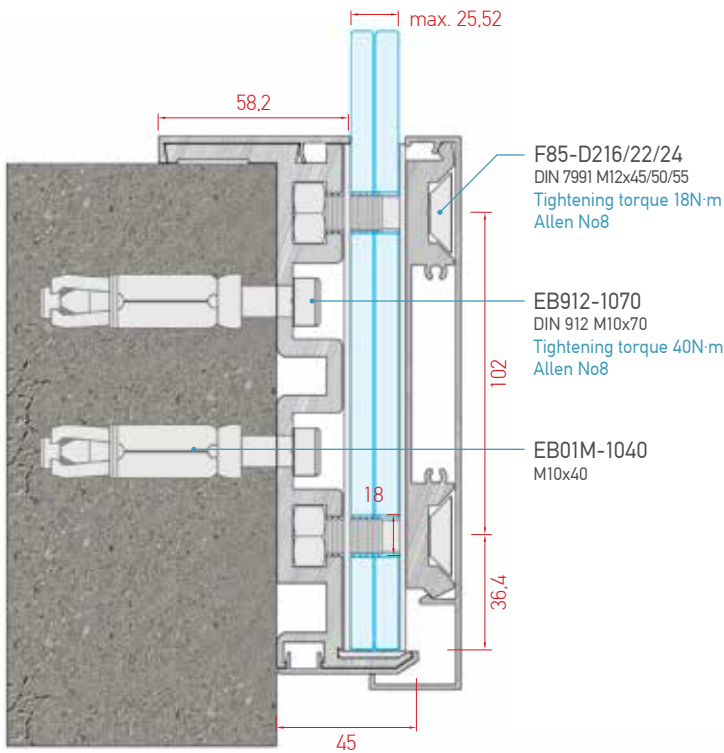
### Characteristics

- Pas de perçage
- Vision totale
- Compatible avec Dc
- Pas de perçage

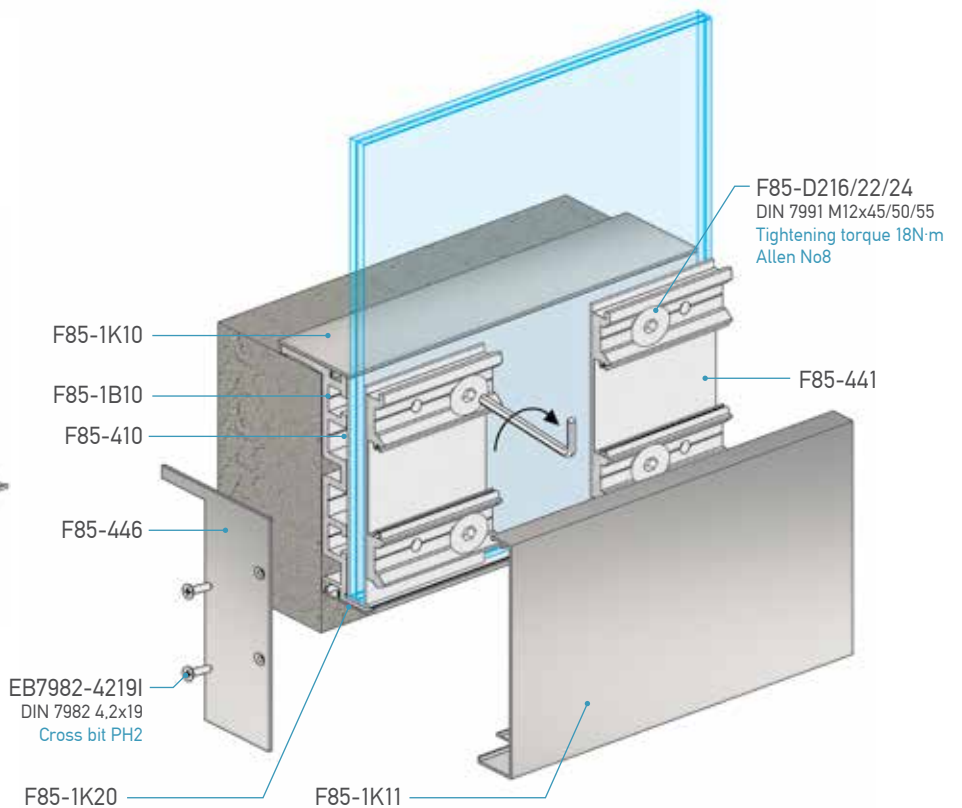
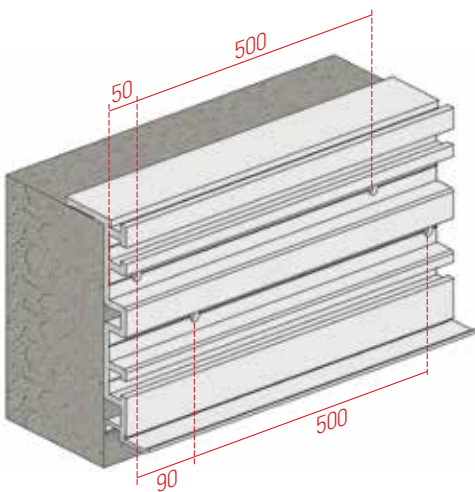
# Type Dc

## External support with fascia aluminium profile Système en applique

### Technical specifications / Specifications techniques

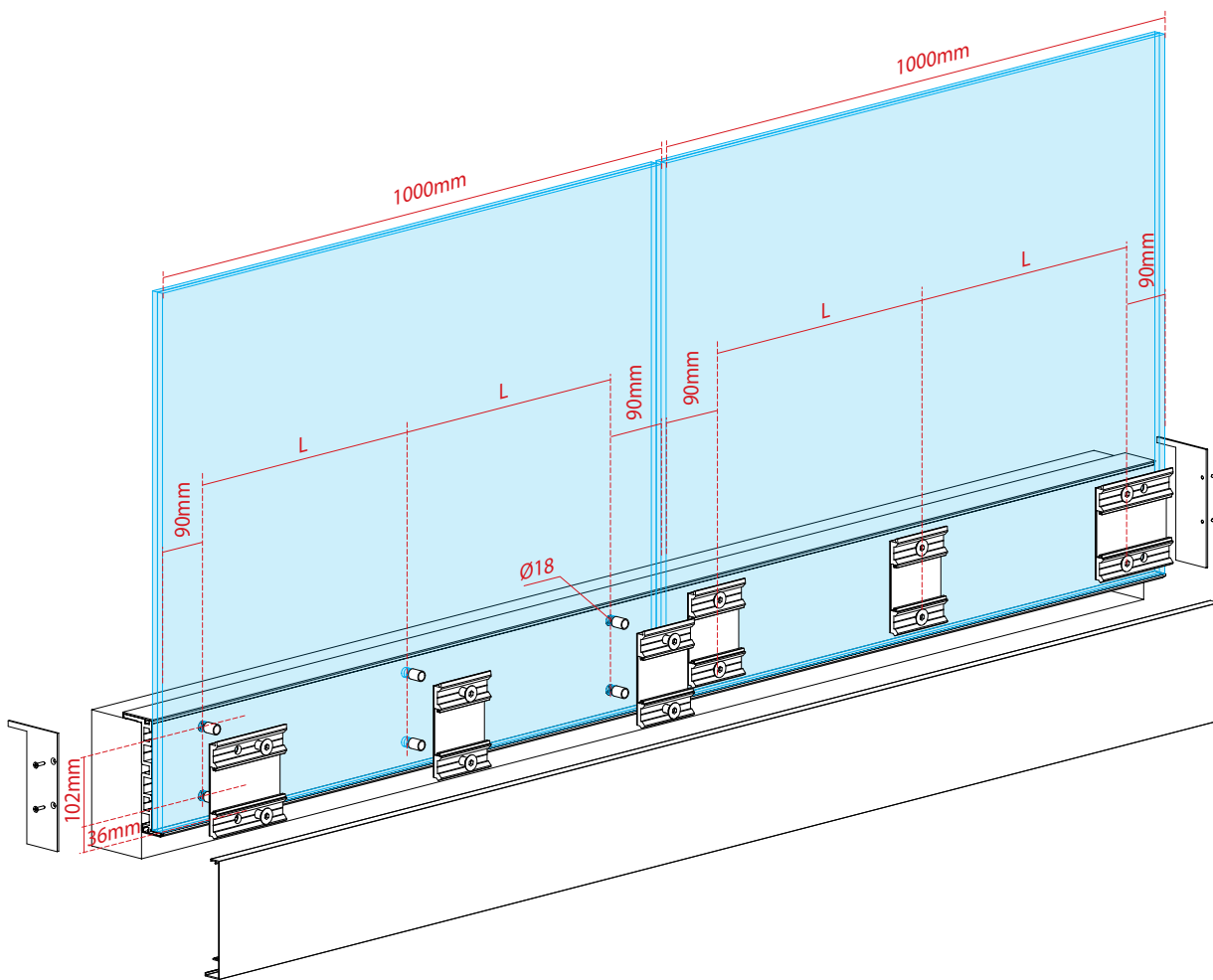


Glass section Dc		
16mm	20mm	24mm
Min. 16.76mm	Min. 20.76mm	Min. 24.76mm
Max. 17.52mm	Max. 21.52mm	Max. 25.52mm
Recommended glass		
17.52mm (8-1.52-8)	21.52mm (10-1.52-10)	25.52mm (12-1.52-12)



Supporting base assembly / Installation de Type Dc

Standard supporting base type Ds Drill assembly for glasses with a length of 1000mm



Recommended number of accessories / m	8mm+ 4PVB+8mm (88.4)				10mm+ 4PVB+10mm (1010.4)				12mm+ 4PVB+12mm (1212.4)			
	Glass height	Handrail	No. Access. / m	L	Glass height	Handrail	No. Access. / m	L	Glass height	Handrail	No. Access. / m	L
600mm	-	-	2	820mm	600mm	-	2	820mm	600mm	-	2	820mm
	F50-200	-	2	820mm	600mm	F50-200	2	820mm	600mm	F50-200	2	820mm
1000mm	-	-	3	410mm	1000mm	-	3	410mm	1000mm	-	3	410mm
	F50-200	-	2	820mm	1000mm	F50-200	2	820mm	1000mm	F50-200	2	820mm
1200mm	-	-	4	273mm	1100mm	-	4	273mm	1100mm	-	4	273mm
	F50-200	-	3	410mm	1100mm	F50-200	3	410mm	1100mm	F50-200	3	410mm

The stated results are only indicative and do not guarantee the system's durability since they are not a result of a structural study

# Type Dc

External support with fascia aluminium profile  
Pose en applique (nez de dalle)

Installation step by step / Etapes d'installation





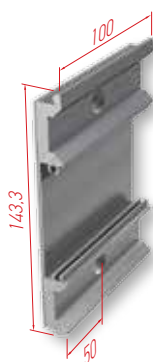
Profiles & accessories / Profilés & Accessoires

The glass support system type Dc uses type D profiles and accessories in combination with the following accessories



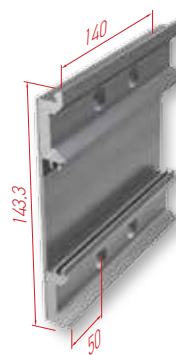
Aluminium facing

Code	<b>F85-1K11</b>
Weight	1026 gr/m
Length	6 m



Glass Supporting Accessory

Code	<b>F85-440</b>
Package	10 pcs.



Glass Supporting Accessory (end)

Code	<b>F85-441</b>
Package	10 pcs.



Cap

Code	<b>F85-446/16*</b> <b>F85-446/20**</b> <b>F85-446/24***</b>
Package	1 pair

\* 8mm+4PVB+8mm  
\*\* 10mm+4PVB+10mm  
\*\*\* 12mm+4PVB+12mm



Support Accessories  
Fixing Screws (Inox304)

Code	<b>F85-D216*</b> <b>F85-D220**</b> <b>F85-D224***</b>
Package	20 pcs.

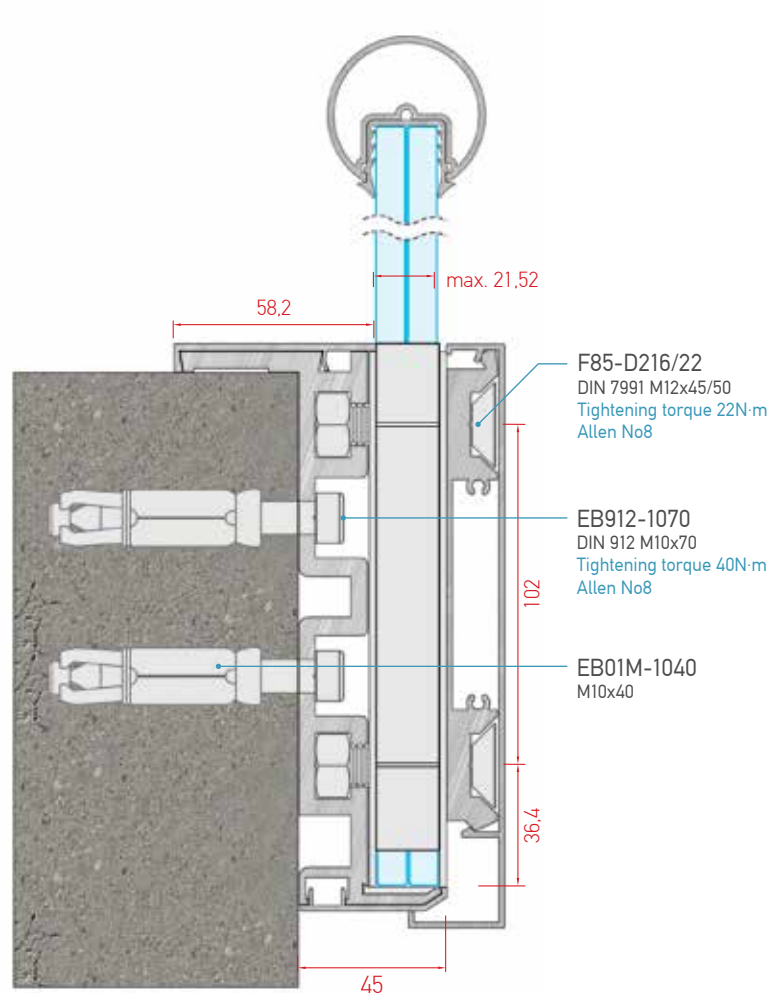
\* 8mm+4PVB+8mm  
\*\* 10mm+4PVB+10mm  
\*\*\* 12mm+4PVB+12mm

**Type Dc**  
No Drill

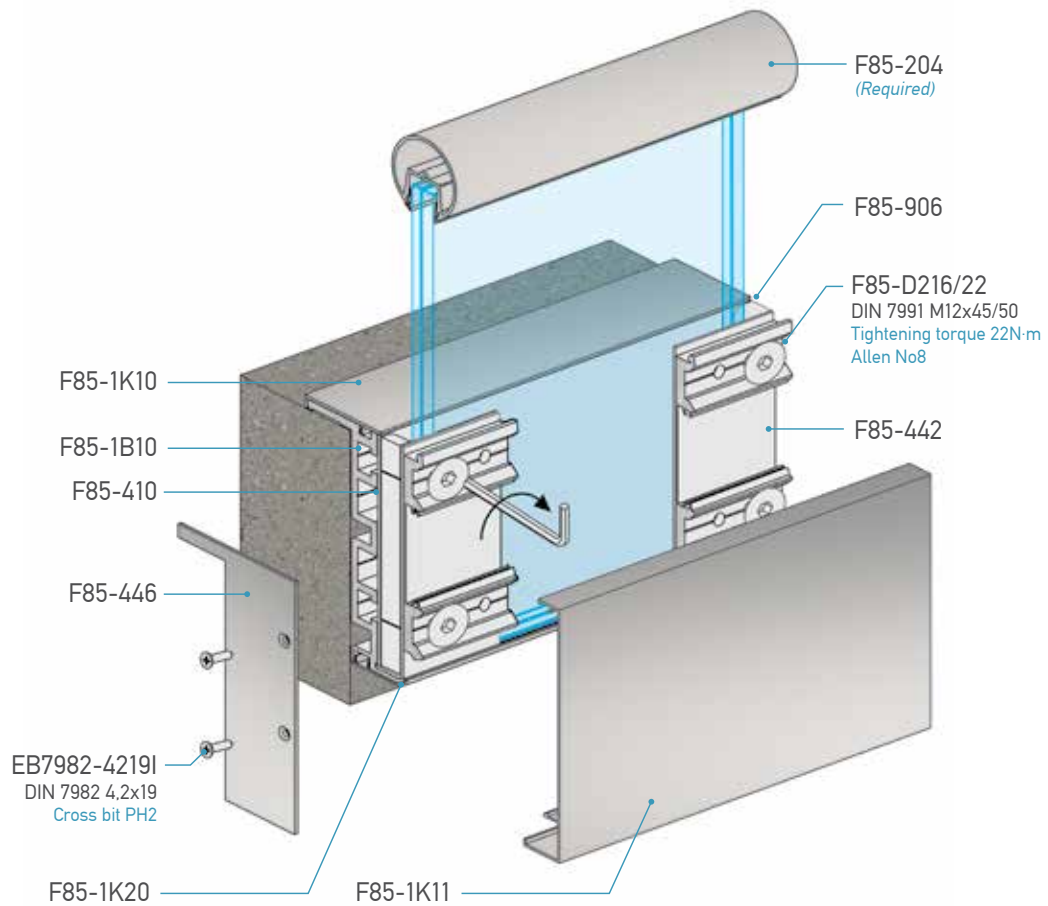
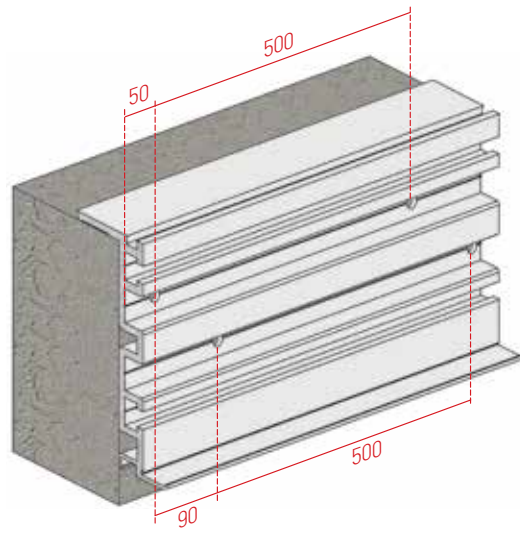
Evolutionary concept of external fascia mounting, without any drilling on the glass panels

Conception revolution aire sans percer le verre!

Technical specifications / Specifications techniques



Glass section Dc No Drill	
16mm	20mm
Min. 16.76mm	Min. 20.76mm
Max. 17.52mm	Max. 21.52mm
Recommended glass	
17.52mm (8-1.52-8)	21.52mm (10-1.52-10)



# Type Dc

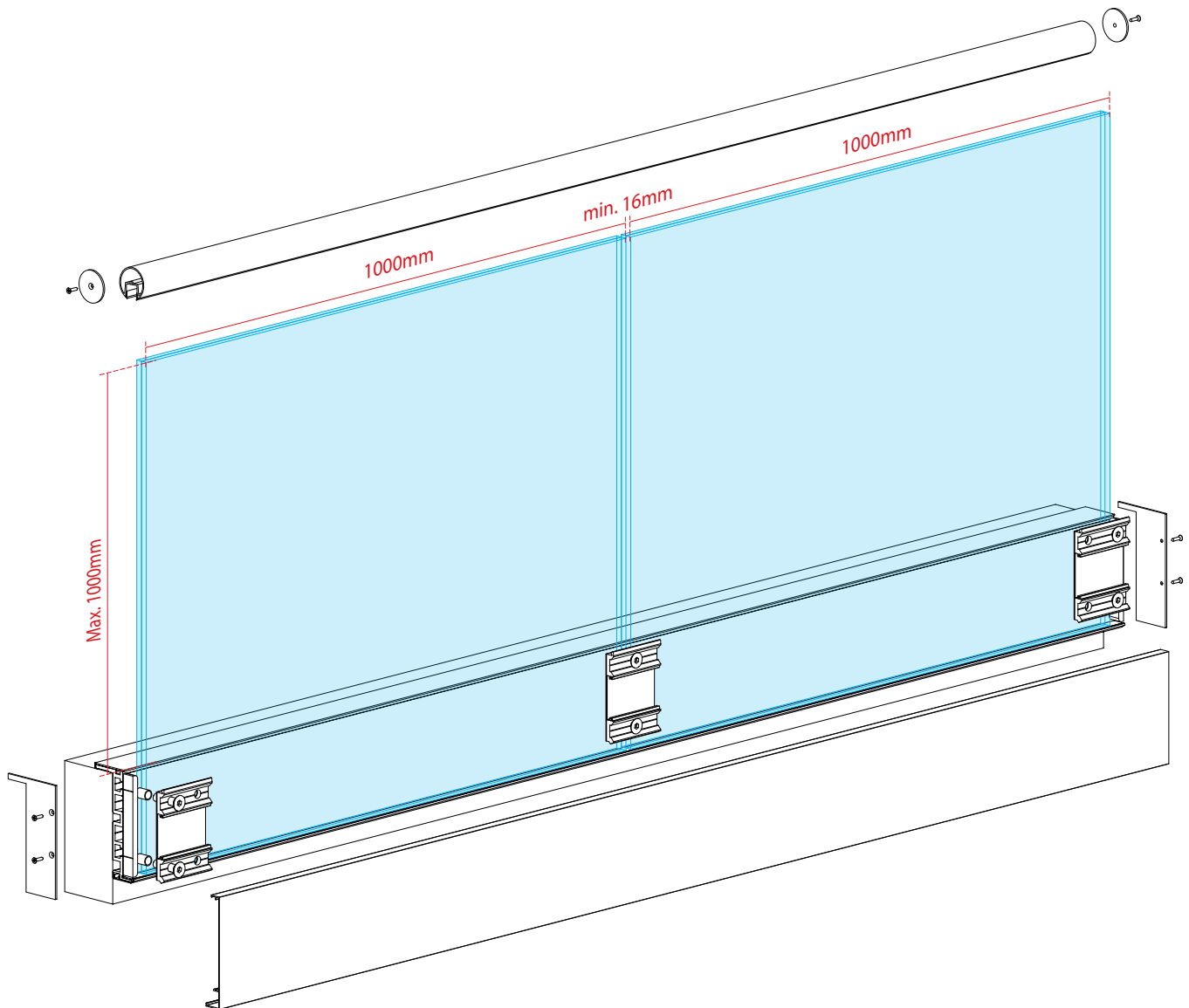
No Drill

Evolutionary concept of external fascia mounting,  
without any drilling on the glass panels

Conception révolutionnaire sans percer le verre!

## Supporting base assembly / Installation de Type Dc

Standard supporting base type Ds No Drill assembly for glasses with a length of 1000mm



**ATTENTION!**

The specifications of this system are for:

- a) maximum glass height of 1000mm
- b) use exclusively with a handrail.

**ATTENTION!**

Specifications du système:

- a) hauteur du verre maximale de 1000mm
- b) application de main courante obligatoire

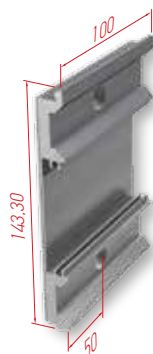
Profiles & accessories / Profilés & Accessoires

The glass support system type Dc uses type D profiles and accessories in combination with the following accessories



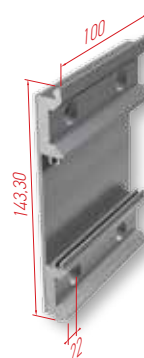
Cap Front:

Code	<b>F85-1K11</b>
Weight	1026 gr/m
Length	6 m



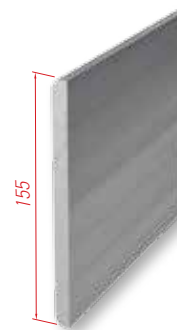
Glass Supporting Accessory

Code	<b>F85-440</b>
Package	10 pcs.



Glass Supporting Accessory (end)

Code	<b>F85-442</b>
Package	10 pcs.



Glass Spacer Profile

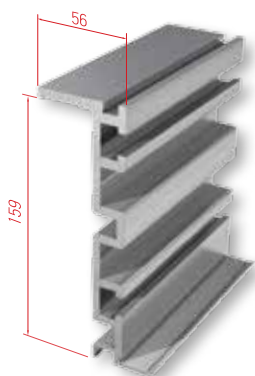
Code	<b>F85-906</b>
Length	1 m



Cap

Code	<b>F85-446/16*</b> <b>F85-446/20**</b>
Package	1 pair

\* 8mm+4PVB+8mm  
\*\* 10mm+4PVB+10mm



Wall base

Code	<b>F85-1B10</b>
Weight	4740 gr/m
Length	6 m



PVC sheet 1mm

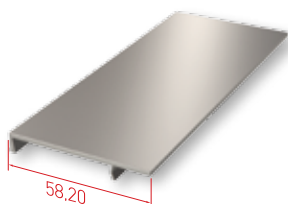
Code	<b>F85-410</b>
Color	White/Black
Length	2 m



Support Accessories Fixing Screws (Inox304)

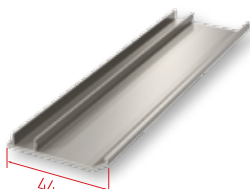
Code	<b>F85-D216*</b> <b>F85-D220**</b>
Package	20 pcs.

\* 8mm+4PVB+8mm  
\*\* 10mm+4PVB+10mm



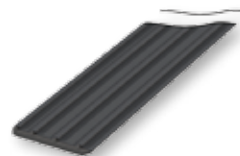
Top Cover

Code	<b>F85-1K10</b>
Weight	366 gr/m
Length	6 m



Bottom Cover

Code	<b>F85-1K20</b>
Weight	220 gr/m
Length	6 m



Base gasket

Code	<b>F85-437</b>
Length	200 m


# Type E

## Heavy duty on floor system


### Systeme de haute exigence



### Heavy duty on floor system

 Glass balustrades are unmatched for their ability to bring safety, visual appeal and practicality to high traffic external spaces. The excellent engineering design of this system with the certified mechanical properties make it a signature product. Safety is no longer a question or concern, for any type of construction even with the strictest specifications. Specified glass panels in 88.4, 1010.4 and 1212.4 with thickness of 17.52, 21.52 and 25.52, are to be used with this system.

### Systeme de haute exigence

 Quand la sécurité rencontre la transparence, c'est grâce au système Type E qui les en offrent. La combinaison de profils de sol avec les bases de support très robuste, et l'usage de verre à 88.4, 1010.4, 1212.4 à l'épaisseur de 17.52, 21.52 et 24.52 mm, les demandes les plus exigeants sont satisfaits. Le système Type E a fait l'objet de tests de résistance mécanique, garantie d'une utilisation sans risque dans les conditions les plus sévères. Le verre est fixé par serrage, aucune perçage est requis. Le système peut être utilisé dans des espaces public et de grand trafic: hôpitaux, centres commerciaux, aéroports, salles de spectacles et stade de sports.



## Advantages



- Excellent mechanical properties
- Certified with glass panels at 1200mm without handrail
- wide range of glass thicknesses
- assembly and alignment from internal side of balcony
- safety guaranteed
- suitable for public and heavy traffic areas: hospitals, office buildings, sports stadiums and shopping centers

## Caracteristics



Système livré prêt à l'emploi.

- Robustesse
- Longévité
- Certifié sans main courante.
- Flexibilité à l'adaptation de verre
- Choix de coloris : RAL, Sable, anodise brosse
- Sécurité maximale

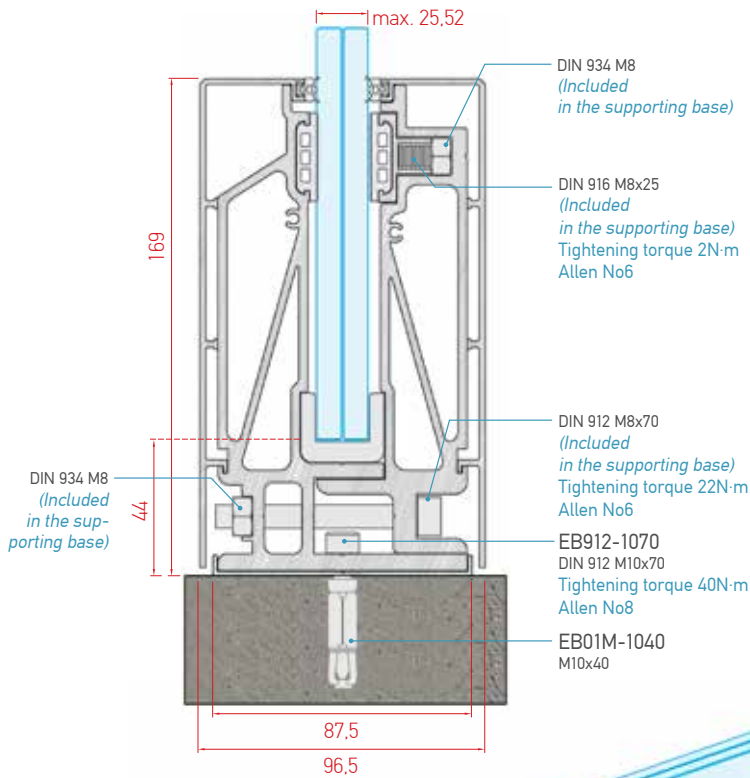


# Type E

## Heavy duty on floor system

Systeme de haute exigence

### Technical specifications / Specifications techniques



Glass section E		
16mm	20mm	24mm
Min. 16.76mm	Min. 20.76mm	Min. 24.76mm
Max. 17.52mm	Max. 21.52mm	Max. 25.52mm
Recommended glass		
17.52mm (8-1.52-8)	21.52mm (10-1.52-10)	25.52mm (12-1.52-12)

#### Fixing point / Detail de fixation

F85-300E/16 F85-300E/20  
F85-300E/24

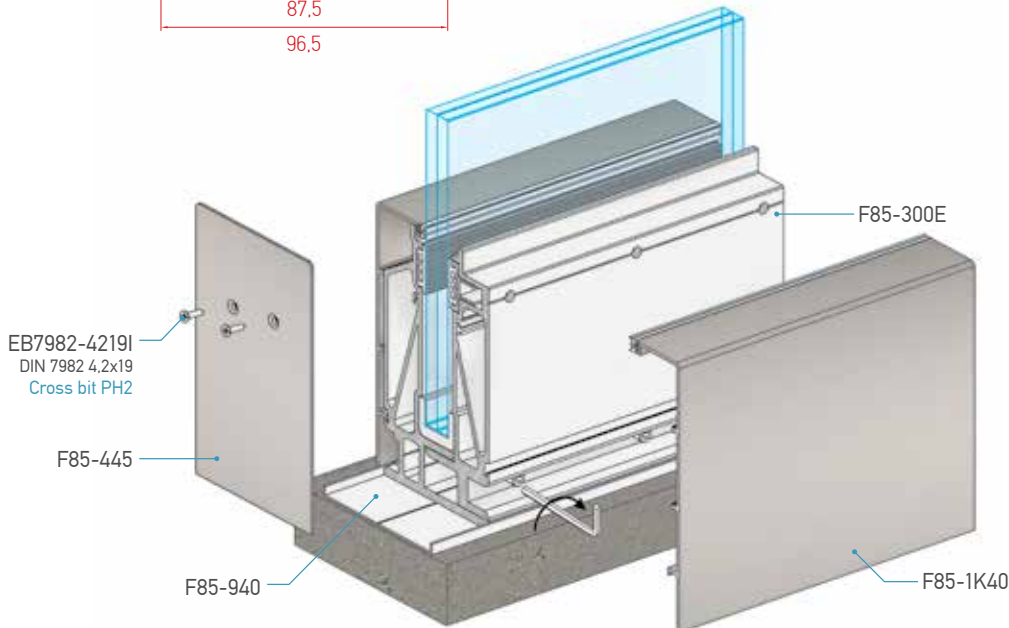
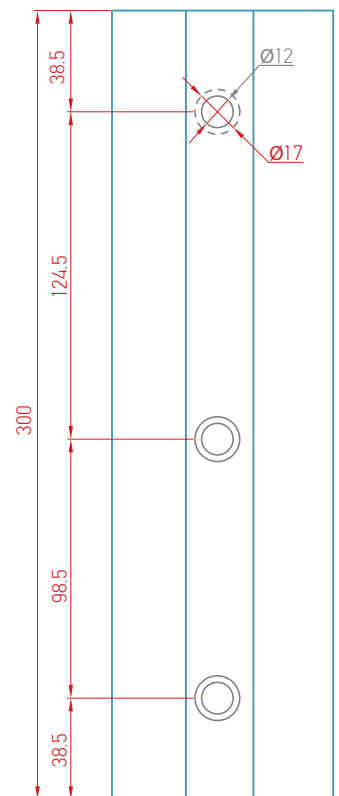


Table of system certifications

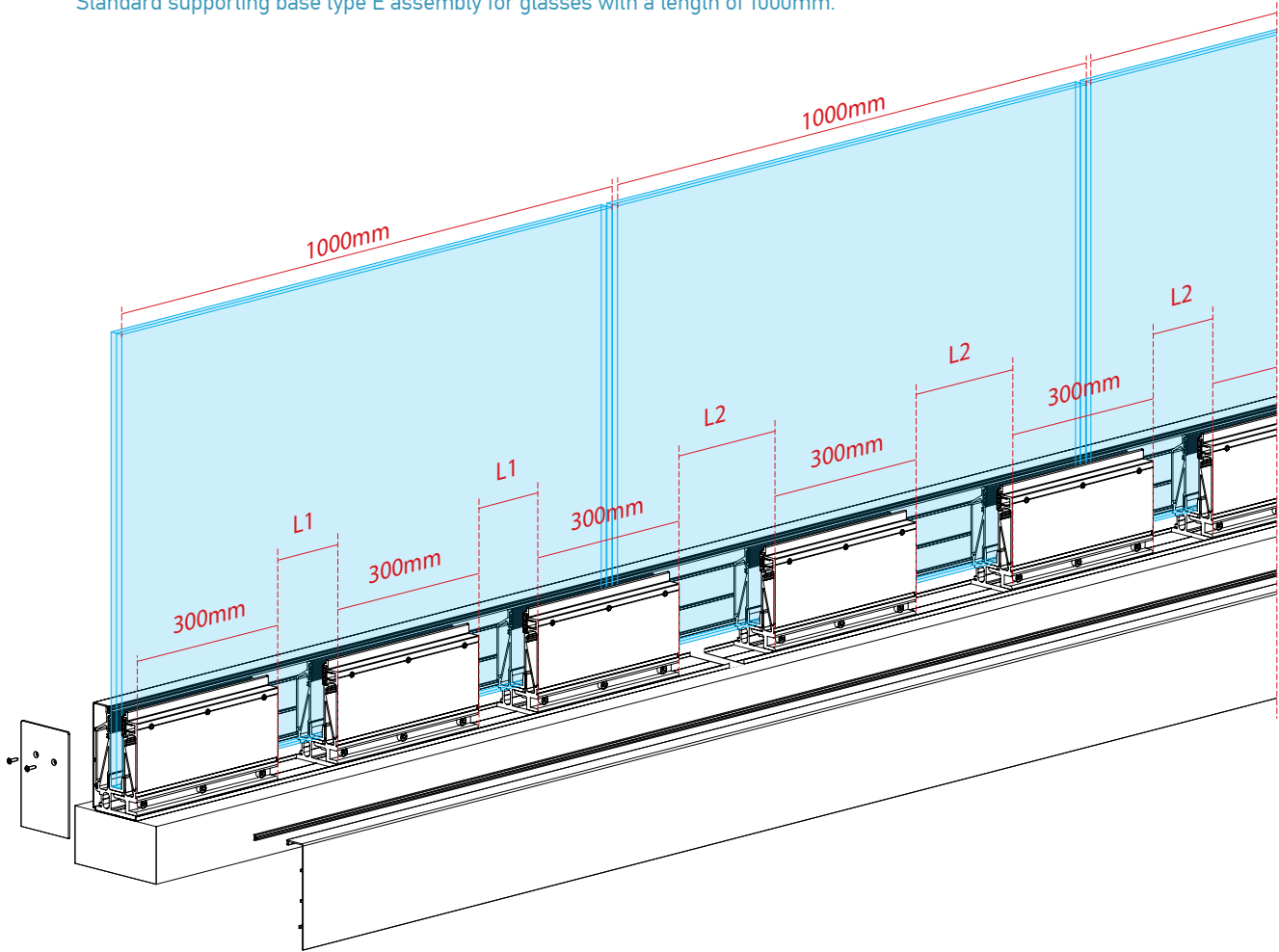
Type	Handrail	Type of glass	Type of membrane	Glass height	Linear load	Impact energy	Certification organization
E	F50-200	10+10mm LAMIN.	4x0,38mm PVB	1200mm	-	442 J	IFT Rosenheim

According to: \*TRAV 2003-01



Supporting base assembly / Installation de Type E

Standard supporting base type E assembly for glasses with a length of 1000mm.



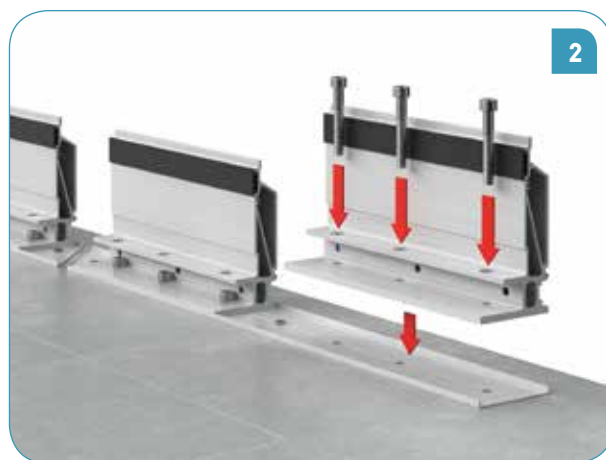
Recommended number of bases / m	8mm+ 4PVB+8mm (88.4)				10mm+ 4PVB+10mm (1010.4)				12mm+ 4PVB+12mm (1212.4)			
	Height height	Handrail	L1	L2	Height height	Handrail	L1	L2	Height height	Handrail	L1	L2
600mm	-	-	125mm	200mm	-	-	125mm	200mm	-	-	125mm	200mm
	F85-200	-	550mm	700mm	F85-200	-	550mm	700mm	F85-200	-	550mm	700mm
	F85-201	-	550mm	700mm	F85-201	-	550mm	700mm	F50-200	-	550mm	700mm
1000mm	-	-	125mm	200mm	-	-	125mm	200mm	-	-	125mm	200mm
	F85-200	-	125mm	200mm	F85-200	-	125mm	200mm	F85-200	-	125mm	200mm
	F85-201	-	125mm	200mm	F85-201	-	125mm	200mm	F50-200	-	125mm	200mm
1200mm	-	-	125mm	200mm	-	-	125mm	200mm	-	-	125mm	200mm
	F85-200	-	125mm	200mm	F85-200	-	125mm	200mm	F85-200	-	125mm	200mm
	F85-201	-	125mm	200mm	F85-201	-	125mm	200mm	F50-200	-	125mm	200mm

The stated results are only indicative and do not guarantee the system's durability since they are not a result of a structural study.

# Type E

Heavy duty on floor system  
Système de haute exigence

## Installation step by step / Etapes d'installation

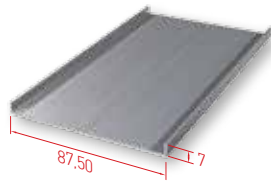


Profiles & accessories / Profilés & Accessoires



Base cover

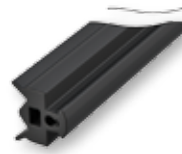
Code	<b>F85-1K40</b>
Weight	1185 gr/m
Length	6 m



Base guide

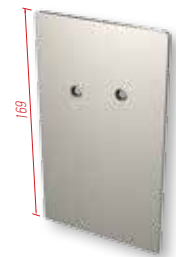
Code	<b>F85-940</b>
Weight	373 gr/m
Length	6 m

Available in Ral 9006 /  
Disponible en Ral 9006



Glass Gasket

Code	<b>EA410-409M</b>
Length	200 m



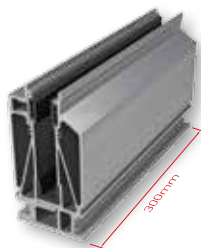
Cap

Code	<b>F85-445/16*</b> <b>F85-445/20**</b> <b>F85-445/24***</b>
Package	1 pair

\* 8mm+4PVB+8mm  
\*\* 10mm+4PVB+10mm  
\*\*\* 12mm+4PVB+12mm

Glass supporting bases / Bases de support

The supporting bases include tightening screws, chock gaskets, gaskets and pressure plates.



Glass base

Code	<b>F85-300E/16*</b> <b>F85-300E/20**</b> <b>F85-300E/24**</b>
Package	6 pcs.


\* 8mm+4PVB+8mm  
\*\* 10mm+4PVB+10mm  
\*\*\* 12mm+4PVB+12mm

## Top handrails & brackets

Main courantes et fixations




### Top handrails & brackets

 All Crystal Line systems can be optionally mounted with a top handrail. Available in three different sizes and shapes (Pic. 1 & 3), two round one of 50mm diameter and an oval in 76mm width (Pic. 2). The handrails are designed to be mounted and secured on the glass panel using rubber gaskets.

In cases where the handrail is desired or specified to be side mounted on the glass panel, special brackets are applied on the drilled glass panel.

Available in all RAL shades, wood imitation and brushed anodized same as all Crystal Line profiles.

### Main courantes et fixations

 Toute la gamme de systèmes Crystal Line peut adapter des main courantes.

ALUMINCO propose trois types de main courantes, deux en rond (Ph.1) de diamètre 50mm et une ovale à 73cm de largeur (Ph. 2). Elles sont montées à l'aide de joints et fixées au dessous ou bien sur verre avec des supports.

Disponibles en tout teint de RAL, sable et anodisé brossé, comme l'ensemble de profils Crystalline.



## Top handrails & brackets

Main courantes et fixations



Round handrail

Profil **F85-204**  
Rubber gasket **F85-406** (for glass 17,52)  
**F85-407** (for glass 21,52)



Oval shaped handrail

Profil **F85-203**  
Rubber gasket **F85-406** (for glass 17,52)  
**F85-407** (for glass 21,52)



Handrail  
17.52mm & 21.52mm  
Profil **F85-317** (17.52)  
**F85-321** (21.52)



Round handrail

Profil **F85-202**  
Rubber gasket **EA 410-420M**



Round handrail

Profil **F50-200**  
Part **4148-200**



Round handrail

Profil **F50-200**  
Part **F85-451**

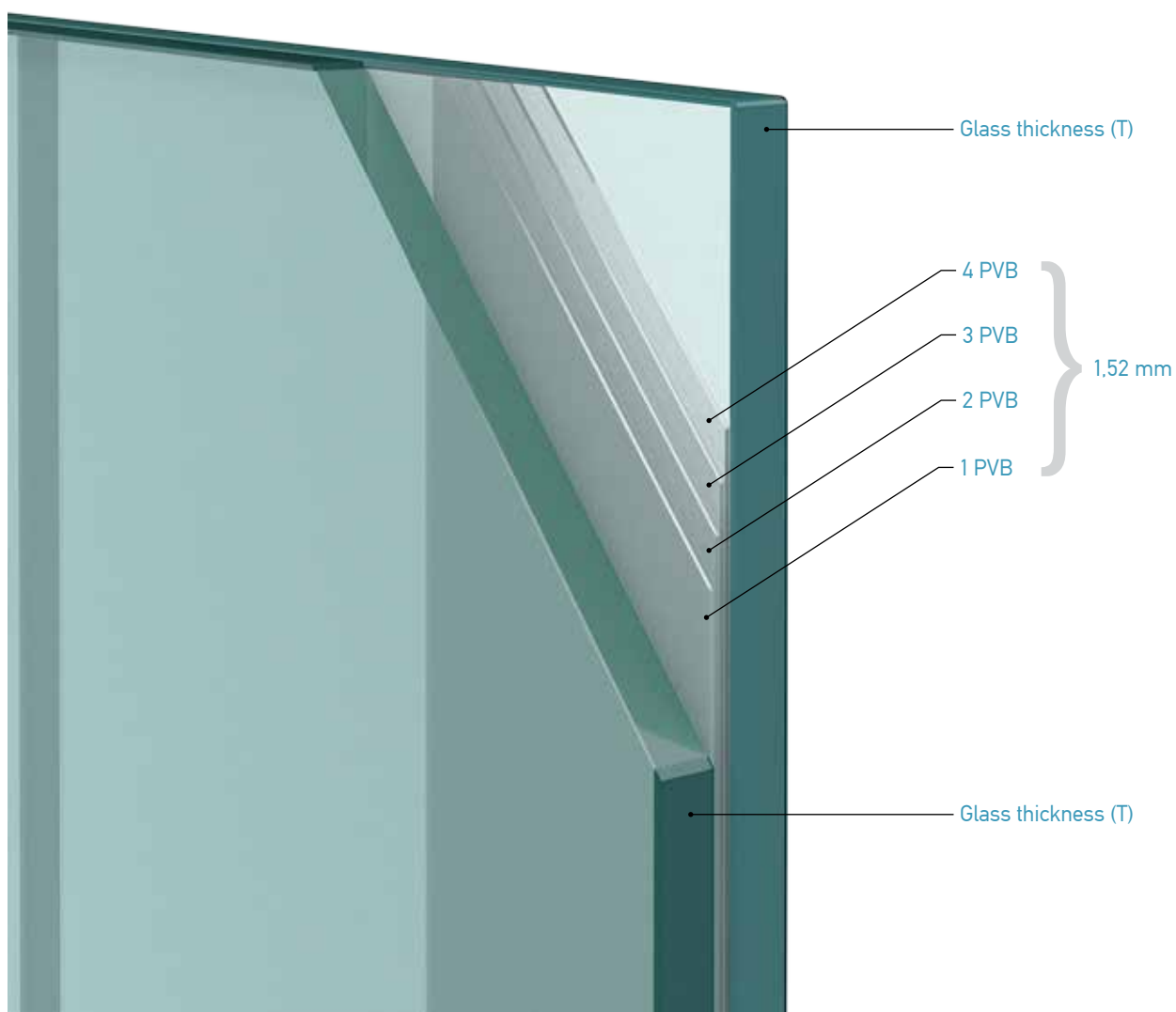
Application of hand rail / Application de main courrante



## Glasses

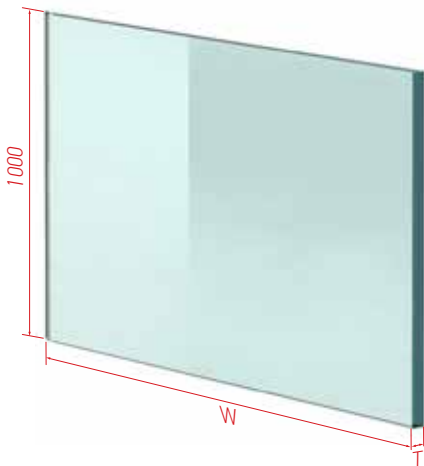
Verre

### ■ Glass detail /Detail du verre





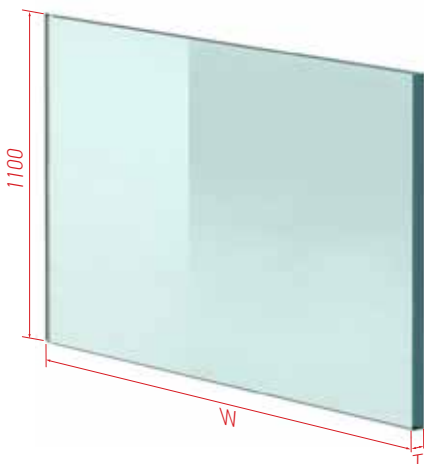
■ Glass dimensions 1000mm / Dimensions de verre 1000mm



Höhe: 1000mm		T: (8+1,52+8) 17,52mm
Code	W	Gewicht Kgr
F85-GL16U10	600	24
F85-GL16U11	800	32
F85-GL16U07	900	36
F85-GL16U08	1000	40
F85-GL16U12	1100	44
F85-GL16U09	1200	48
F85-GL16U13	1300	52

Height: 1000mm		T: (5+0,76+5) 10,76mm
Code	W	Weight Kgr
F85-GL10U03	500	12.5
F85-GL10U04	600	15
F85-GL10U05	800	20
F85-GL10U01	900	22.5
F85-GL10U02	1000	25
F85-GL10U06	1100	27.5
F85-GL10U07	1200	30

■ Glass dimensions 1100mm / Dimensions de verre 1100mm



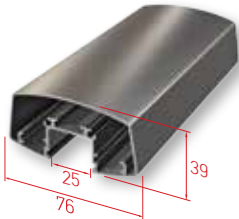
Height: 1100mm		T: (8+1,52+8) 17,52mm
Code	W	Weight Kgr
F85-GL16U14	600	26.4
F85-GL16U15	800	35.2
F85-GL16U16	900	39.6
F85-GL16U12	1000	44
F85-GL16U17	1100	48.4
F85-GL16U18	1200	52.8

Dimensions may vary due to perimetric grinding.

## Accessories - Glass supporting system

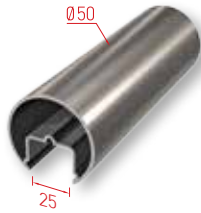
Accessoires et viserie

### Handrail profiles / Main courrante profiles



Oval shaped handrail

Code	<b>F85-203</b>
Weight	1096 gr/m
Length	6 m



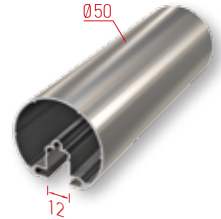
Round handrail

Code	<b>F85-204</b>
Weight	973 gr/m
Length	6 m



Round handrail

Code	<b>F50-200</b>
Weight	814 gr/m
Length	6 m



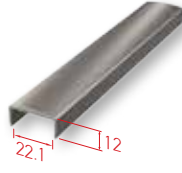
Round handrail

Code	<b>F85-202</b>
Weight	721 gr/m
Length	6 m



Handrail 17.52mm

Code	<b>F85-317</b>
Weight	198 gr/m
Length	6m



Handrail 21.52mm

Code	<b>F85-321</b>
Weight	219 gr/m
Length	6m

### Handrail caps / Embouts



Handrail cap  
F85-203

Code	<b>F85-403</b>
Package	80 pcs. (box) 8 pcs. (blister)



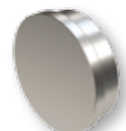
Handrail cap  
F85-202/204

Code	<b>F85-404</b>
Package	80 pcs. (box) 8 pcs. (blister)



Handrail cap  
F50-200

Code	<b>4434</b>
Package	50 pcs. (box) 2 pcs. (blister)



Handrail cap  
F50-200 flat

Code	<b>4453</b>
Package	50 pcs.

Handrail connection accessories, seam covers / Connecteurs angulaires



Handrail connector  
F85-202/204 Straight

Code **4251**  
Package 40 pcs. (box)  
8 pcs. (blister)



Handrail connector  
F85-202/204 Angled

Code **4253**  
Package 40 pcs.



Handrail seam cover  
F85-203

Code **F85-402**  
Package 45 pcs. (box)  
4 pcs. (blister)



Handrail seam cover Ø50  
with cover

Code **4509Z**  
Package 20 pcs. (box)  
4 pcs. (blister)

Handrail supports / Support de main courrante



Wall support for handrail  
F85-202

Code **F85-452**  
Package 40 pcs.



Wall support for handrail  
F50-200

Code **4165**  
Package 40 pcs.



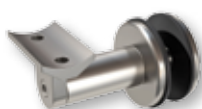
Wall support for handrail  
F50-200

Code **4140**  
Package 20 pcs.



Wall support for handrail  
F50-200

Code **4141**  
Package 20 pcs.



Handrail support  
F50-200

Code **F85-451**  
Package 25 pcs. (box)  
2 pcs. (blister)



Handrail support  
F50-200

Code **4148-200\*** (Inox304)  
**4148-201\*** (Inox316)  
Package 12 pcs. (box)  
4 pcs. (blister)

## Accessories - Glass supporting system

Accessoires et viserie

### Handrail gaskets / Joints de main courrante



"Π" shaped gasket

Code **F85-406**  
(for glass 17,52)

Package 50 m



"Π" shaped gasket

Code **F85-407**  
(for glass 21,52)

Package 50 m

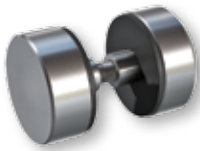


Slug gasket

Code **EA410-420M**

Package 350 m

### Miscellaneous / Divers



Glass Alignment Knurl

Code **F85-D130**

Package 10 pcs.



Type A cover extractor

Code **F85-E011**

Package 1 pc



Silicone

Code **UA220-01DB**

Package 1 pc

### Fixing screw / Viserie



Inox allen screw M10x70

Code **EB912-1070**

Package 50 pcs.



Expansion plug

Code **EB01M-1040**

Package 50 pcs.

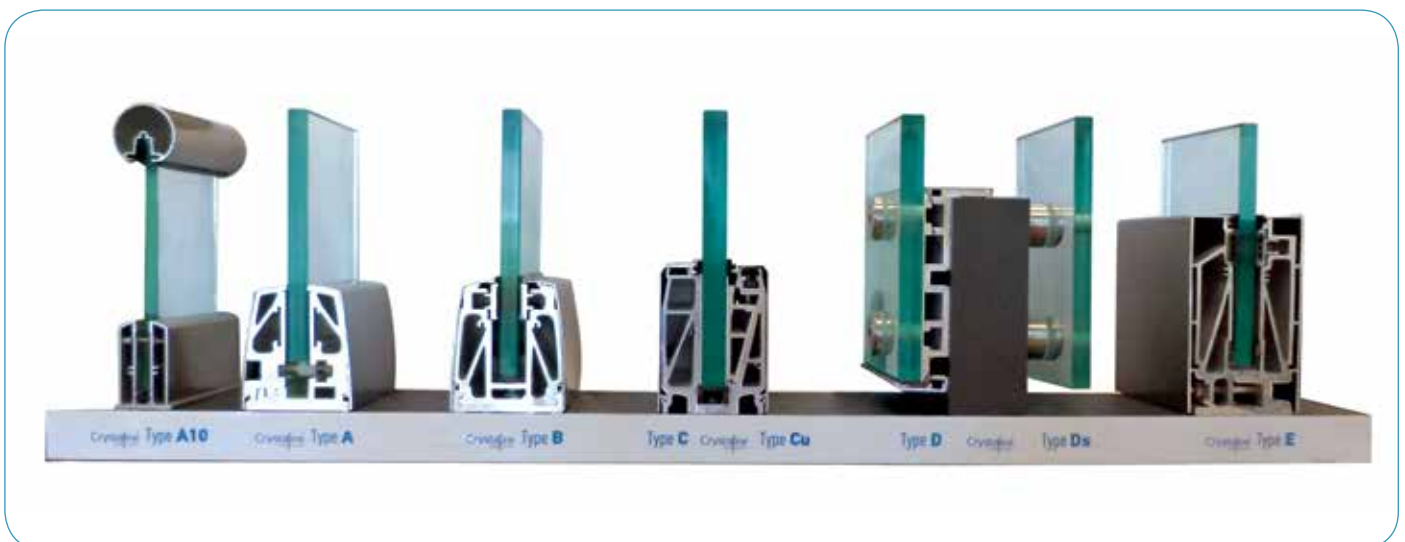


Concrete Torx 7,5x112

Code **EBM-75112G**

Package 50 pcs.

## Promo display



Sample Stand F85

Code **F85-401**







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